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GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

ANALYSIS OF RATES FOR DELHI (VOL.2) 2007

(REPRINT - 2010)

PUBLISHED BY

DIRECTOR GENERAL (WORKS) CPWD, NIRMAN BHAVAN, NEW DELHI- 110011

सत्यमेव जयते

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Published under the Authority of Director General of Works, CPWD, New Delhi

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FOREWORD TO REPRINT - 2010

Analysis of Rates for Delhi - 2007 published by CPWD is a very comprehensive document which is useful for execution of works all over India in all Central Govt. Departments, many state Govt. Deptts., Public sector Undertakings and with Private Sector builders and Architects etc.

Analysis of Rates for Delhi - 2007 has already been updated by deleting Analysis of items which are either obsolete or are not in use and modifying the analysis of many items correspond to items of DSR 2007 based on new materials and Technology. Subsequently, some errors/ omissions /discrepancies were brought to the notice of this Directorate and accordingly, correction slip no. 1 to 5 to DAR 2007 vol. I and vol. II were issued upto April 2010.

Analysis of Rates for Delhi - 2007 (Reprint- 2010) incorporates all the correction slips issued till date which will be read after co-relating with relevant items as per Delhi Schedule of Rates -2007 (Reprint - 2010) & CPWD Specifications 2009 vol. I & II.

I am sure that this DAR -2007 (Reprint- 2010) will be very useful to all concerned.

1/6/2010

(BHISHMA KUMAR CHUGH)
Director General of Works
CPWD N. DELHI

New Delhi
May, 2010

PREFACE TO DELHI ANALYSIS OF RATES, 2007 (Reprint - 2010)

1. This edition is the first Re-print of DAR- 2007 after incorporating correction slip no. 1 to 5 to DAR - 2007.

2. DAR 2007 (Reprint 2010) has been prepared on the basis of coefficients of labour, materials, sundries, hire charges etc. adopted in DAR 2007 and market rates of materials at Delhi collected during the period of April 2007 to October 2007. Labour rates are minimum wage rates issued by the Government of National Capital Territory of Delhi w.e.f. 01/09/2007.

3. Delhi Analysis of Rates 2007 (Reprint -2010) Vol-I & II with upto date correction slips no. 1 to 5 which may be followed after correlating with relevant items.

4. Sundries have been considered as 2.60 times based on Cost Index of Delhi as 260 as on 1/10/2007 over DPAR 01/01/1992 as 100 and are now at par with DPAR- 2007.

5. Contractor's profit and overheads @ 15% has been adopted as approved by the DGW vide Office Memorandum no. DG(W)MAN/150 dated 14/12/2007.

6. This DAR will be read along with CPWD specifications, 2009 Vol-I & II.

7. As per field observations, it was observed that quantity of cement required for various BMC/RMC items of RCC was found to be lesser than earlier provisions which have been accordingly modified.

8 **A lot of effort has gone into the preparation and finalization of this Analysis of Rates (Reprint - 2010). I convey my deep appreciation and sincere thanks to Shri Virendra Sharma, CE(CSQ), Shri Mayank Tilak, SE(TAS), Shri A.K.Aggarwal, EE(S&S), Shri A.K. Upadhyay, AE and other officers and staff of TAS unit for sincere efforts made in the preparation of this document in such a short time.**

9 Due care has been taken to reprint this Analysis of Rates as correctly as possible. It is, however, possible that some errors might have crept in. In case any error or omission is noticed, it may be brought to the notice of the **Superintending Engineer (TAS), CPWD, Room no. 418, 'A' Wing, Nirman Bhawan, New Delhi.**

(N.M.D. Jain)
A.D.G.(Trg.), CPWD
Nirman Bhawan, New Delhi

FOREWORD

Central Public Works Department Analysis of Rates for Delhi is a very comprehensive and useful document. It is based on scientific assessment of inputs of materials, labour and machinery in various items of work normally encountered in a project.

It was first compiled in the year 1950, followed by publication or revisions in 1955, 1962, 1972, 1977, 1985 and 1997. Since publication of DAR, 1997, prices of labour and materials have registered substantial increase. Besides the increased cost, there has been a spurt of new construction materials and introduction of mechanised construction techniques for speedier construction. This has necessitated revision of existing DAR, 1997 to include the above changes. Accordingly, this Analysis of Rates for Delhi, 2007 has been prepared incorporating element of machinery and prefabricated building components, wherever applicable.

Earlier C.P.W.D. Analysis of Rates for Delhi was a confidential document and was issued to CPWD Officers and Government Departments only. In this age of transparency, we feel that this is an anachronism. Therefore, for the first time DAR, 2007 is being published as an open document and shall be available in two volumes. This will facilitate in obtaining feed back from the construction industry and the professionals for continuous updation and improvement in the document.

Although DAR, 2007 contains most of the items of DAR, 1997, analysis of items which are either obsolete or are not in use have been deleted. Similarly, analysis of many items have been modified to correspond to items of DSR, 2007. **Several new analysis of items pertaining to new materials and new technologies in the construction sector have also been included.** Analysis of rates of many items also incorporate element of machinery instead of the lump sum provisions.

I wish to place on record the technical input and the effective coordination on the part of Shri D.S.Sachdev, ADG(TD) and the efforts put in by Shri Suresh Kumar, CE(CSQ) and his team of officers in TAS unit in finalising DAR, 2007 in a record time.

I am sure that C.P.W.D. Analysis of Rates for Delhi, 2007 along with Delhi Schedule of Rates, 2007 shall be a useful document to a number of departments, public sector undertakings, private sector builders and architects etc.

(K. Srinivasan)
DIRECTOR GENERAL (WORKS)

New Delhi
February, 2008

PREFACE

1.0 C.P.W.D. Analysis of Rates for Delhi, 2007 is the revised edition of C.P.W.D. Analysis of Rates for Delhi, 1997.

2.0. DAR, 2007 incorporates most of the analysis of DAR, 1997 with all correction slips up-to date and will replace DAR, 1997.

3.0 DAR, 2007 is a bilingual document (Hindi version will follow).

4.0 DAR, 2007 is published in two volumes as under:

Volume Number	Sub-head No.	Contents/ Chapters
One	00	Basic Rates
	01	Carriage of materials
	02	Earth Work
	03	Mortars
	04	Concrete Work
	05	Reinforced Cement Concrete Work
	06	Brick Work
	07	Stone Work
	08	Marble Work
	09	Wood and PVC Work
	10	Steel Work
	11	Flooring
	12	Roofing
Two	13	Finishing
	14	Repairs to Buildings
	15	Dismantling and Demolishing
	16	Road Work
	17	Sanitary Installation
	18	Water Supply
	19	Drainage
	20	Pile Work
	21	Aluminium Work
	22	Water Proofing
	23	Horticulture and Landscape

5.0 Analysis of many items in DAR, 2007, which are either obsolete or are not in use, have been deleted. Similarly, analysis of many items have been modified to correspond to items of DSR, 2007. Several new analysis of items pertaining to new materials and new technologies in the construction sector have also been included. Analysis of rates of many items also incorporate element of machinery instead of lump sum provisions.

6.0 Analysis have been modified to include execution of different works by using various electrical and mechanical equipments i.e. excavators, tower cranes, mobile cranes, mechanical platforms, Batch Mix plant, transit mixers and pumps, piling rigs, pneumatic cutters, chisels, chippers, hammers etc. Built-in provision has been taken in the analysis of rates for new construction technology/ mechanisation.

7.0 Analysis of dry work using prefabricated materials and pre-finished elements for speedier construction are included viz gypsum block walls, calcium silicate and non-asbestos cement board partitions, pre-finished counter tops for kitchen and washbasins, pre-moulded and pre-finished stone work in risers and treads of steps and window sills, dry stone cladding, sub-frames for windows, use of chemical and mechanical fasteners, laying of tiles in flooring and dado with polymer based adhesives etc.

8.0 DAR, 2007 is based on the study of current market rates of materials at Delhi, collected during the period of April, 2007 to October, 2007. Generally, the basic rates of materials, incorporated in the analysis, pertain to materials conforming to BIS Standards/CPWD Specifications/Materials of best quality available in the market.

Labour rates are the minimum wages issued by the Government of Delhi w.e.f. 01-09-2007.

9.0 Lump sum provision of labour/ T& P is replaced with mechanisation inputs. Prominent items incorporating mechanization are earth-work in excavation, RMC / BMC, brick work in superstructure above floor V level, road work, dismantling of R.C.C. work, dismantling of C.C. and flexible pavements, pile work etc.

10.0 Number of uses of steel and wooden shuttering have been reduced from 80 and 16 times to 40 and 8 times respectively, so that proper quality of shuttering is put to use.

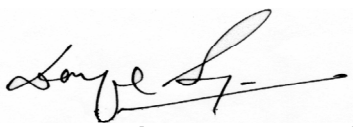
11.0 Contractor's profit and Overheads @ 15% (CP=7.5% & OH 7.5%) has been adopted as approved by the DGW vide Office Memorandum no. DG(W)MAN/150 dated 14-12-2007.

12.0 Sundries have been considered as 1.00 times based on Cost Index of Delhi as 100 over DPAR 01-10-2007.

13.0 A lot of effort has gone into the preparation of this Analysis of Rates. I convey my deep appreciation and sincere thanks to Shri Suresh Kumar, CE, CSQ, Shri Mayank Tilak, S.E. (TAS), Sh. S.K.Jain EE(S&S) –I, Sh.S.C. Malik EE (S&S) -II, Sh. A.V.R.Bhat EE (S&S) – III, Sh. V.P.Singh AE, Sh. H.N.Singh AE, Sh. S.K.Sarkar AE, Sh.L.C.Gothwal AE, Sh.G.K. Jindal AE, Sh. S.S.Pal AE, Sh. Bahal Singh D/Man Gr-I, Sh Upender Walia D/Man Gr.-I and other officers and staff of TAS Unit for sincere efforts made in the preparation of this document in such a short time.

14.0 Due care has been taken to print the C.P.W.D. Analysis of Rates for Delhi as correctly as possible. It is, however possible that some errors might have crept in. In case any error or omission is noticed, it may be brought to the notice of the **Superintending Engineer (TAS), CPWD, Room no. 418, A- wing, Nirman Bhawan, New Delhi.**

15.0 In case of any discrepancy between English and Hindi versions, the English version shall be held valid. Suggestions for improvement are welcome.



(D.S.SACHDEV)
ADG (TD), CPWD,
Nirman Bhawan, New Delhi

New Delhi
February, 2008

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Note: For Sub Heads 1 to 12 refer to Vol.1

SUB HEAD : 13.0

FINISHING

13.1 12 mm cement plaster of mix:
13.1.1 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 : 4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.144	2,278.85	328.15
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				667.76
	Add 1% for water charges				6.68
	TOTAL				674.44
	Add 15% for contractor's profit and overheads				101.17
	Cost of 10.00 sqm				775.61
	Cost of 1.00 sqm				77.56
	Say				77.55

13.1 12 mm cement plaster of mix:
13.1.2 1:6 (1 cement : 6 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 : 6 (1 cement: 6 fine sand). (Rate as per item no. 3.6)	cum	0.144	1,687.70	243.03
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				582.64
	Add 1% for water charges				5.83
	TOTAL				588.47
	Add 15% for contractor's profit and overheads				88.27
	Cost of 10.00 sqm				676.74
	Cost of 1.00 sqm				67.67
	Say				67.65

13. 2 15 mm cement plaster on rough side of single or half brick wall of mix:-
13.2.1 1:4 (1 cement : 4 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1: 4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.172	2,278.85	391.96
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.25	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				777.90

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				7.78
	TOTAL				785.68
	Add 15% for contractor's profit and overheads				117.85
	Cost of 10.00 sqm				903.53
	Cost of 1.00 sqm				90.35
	Say				90.35

13.2 15 mm cement plaster on the rough side of single or half brick wall of mix :
13.2.2 1: 6 (1 cement: 6 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:6 (1 cement: 6 fine sand). (Rate as per item no. 3.6)	cum	0.172	1,687.70	290.28
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.25	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				676.22
	Add 1% for water charges				6.76
	TOTAL				682.98
	Add 15% for contractor's profit and overheads				102.45
	Cost of 10.00 sqm				785.43
	Cost of 1.00 sqm				78.54
	Say				78.55

13.1 20 mm cement plaster of mix
13.3.1 1:4 (1 cement : 4 find sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.224	2,278.85	510.46
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.25	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				951.09
	Add 1% for water charges				9.51
	TOTAL				960.60
	Add 15% for contractor's profit and overheads				144.09
	Cost of 10.00 sqm				1,104.69
	Cost of 1.00 sqm				110.47
	Say				110.45

13.3 20 mm cement plaster of mix
13.3.2 1:6 (1 cement : 6 find sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:6 (1 cement: 6 fine sand).	cum	0.224	1,687.70	378.04
	(Rate as per item no. 3.6)				
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.25	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				818.67
	Add 1% for water charges				8.19
	TOTAL				826.86
	Add 15% for contractor's profit and overheads				124.03
	Cost of 10.00 sqm				950.89
	Cost of 1.00 sqm				95.09
	Say				95.10

13.4 12 mm cement plaster of mix
13.4.1 1:4 (1 cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar - 1:4	cum	0.144	2,578.45	371.30
	(Rate as per item no. 3.9)				
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				710.91
	Add 1% for water charges				7.11
	TOTAL				718.02
	Add 15% for contractor's profit and overheads				107.70
	Cost of 10.00 sqm				825.72
	Cost of 1.00 sqm				82.57
	Say				82.55

13.4 12 mm cement plaster of mix
13.4.2 1:6 (1 cement : 6 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar -1:6	cum	0.144	1987.30	286.17
	(Rate as per item no. 3.11)				
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				625.78
	Add 1% for water charges				6.26
	TOTAL				632.04
	Add 15% for contractor's profit and overheads				94.81
	Cost of 10.00 sqm				726.85
	Cost of 1.00 sqm				72.69
	Say				72.70

13.5 15 mm cement plaster on rough side of single or half brick wall of mix :
13.5.1 1:4 (1 cement: 4 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:4	cum	0.172	2,578.45	443.49
	(Rate as per item no. 3.9)				
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.22	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				829.43
	Add 1% for water charges				8.29
	TOTAL				837.72
	Add 15% for contractor's profit and overheads				125.66
	Cost of 10.00 sqm				963.38
	Cost of 1.00 sqm				96.34
	Say				96.35

13.5 15 mm cement plaster on rough side of single or half brick wall of mix
13.5.2 1:6 (1 cement: 6 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 : 6	cum	0.172	1987.30	341.82
	(Rate as per item no. 3.11)				
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.25	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				727.76
	Add 1% for water charges				7.28
	TOTAL				735.04
	Add 15% for contractor's profit and overheads				110.26
	Cost of 10.00 sqm				845.30
	Cost of 1.00 sqm				84.53
	Say				84.55

13.6 20 mm cement plaster of mix : -
13.6.1 1:4 (1 cement: 4 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 : 4 (1 cement : 4 coarse sand)	cum	0.224	2,578.45	577.57
	(Rate as per item no. 3.9)				
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.25	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				1,018.20
	Add 1% for water charges				10.18
	TOTAL				1,028.38
	Add 15% for contractor's profit and overheads				154.26
	Cost of 10.00 sqm				1,182.64
	Cost of 1.00 sqm				118.26
	Say				118.25

13.6 20 mm cement plaster of mix :
13.6.2 1:6 (1 cement: 6 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 :6	cum	0.224	1,987.30	445.16
	(Rate as per item no. 3.11)				
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.22	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				885.79
	Add 1% for water charges				8.86
	TOTAL				894.65
	Add 15% for contractor's profit and overheads				134.20
	Cost of 10.00 sqm				1,028.85
	Cost of 1.00 sqm				102.89
	Say				102.90

13.7 12 mm cement plaster finished with a floating coat of neat cement of mix :
13.7.1 1:3 (1 cement : 3 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 : 3	cum	0.144	2,870.00	413.28
	(Rate as per item no. 3.3)				
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44

Code	Description	Unit	Quantity	Rate	Amount
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				927.99
	Add 1% for water charges				9.28
	TOTAL				937.27
	Add 15% for contractor's profit and overheads				140.59
	Cost of 10.00 sqm				1077.86
	Cost of 1.00 sqm				107.78
	Say				107.80

13.7 12 mm cement plaster finished with a floating coat of neat cement of mix

13.7.2 1:4 (1 cement: 4 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:4	cum	0.144	2,278.85	328.15
	(Rate as per item No. 3.4)				
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				842.86
	Add 1 % for water charges				8.43
	TOTAL				851.29
	Add 15% for contractor's profit and overheads				127.69
	Cost of 10.00 sqm				978.98
	Cost of 1.00 sqm				97.90
	Say				97.90

13.8 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :

13.8.1 1:3 (1 cement: 3 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement rnortar 1 :3	cum	0.172	2,870.00	493.64
	(Rate as item no. 3.3)				
	LABOUR				
0155	Mason	Day	0. 80	146.55	117.24

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.88	135.25	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				1,054.68
	Add 1 % for water charges				10.55
	TOTAL				1,065.23
	Add 15% for contractor's profit and overheads				159.78
	Cost of 10.00 sqm				1,225.01
	Cost of 1.00 sqm				122.50
	Say				122.50

13.8 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :

13.8.2 1:4 (1 cement: 4 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement Mortar 1 :4	cum	0.172	2,278.85	391.96
	(Rate as item no. 3.4)				
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.25	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				953.00
	Add 1% for water charges				9.53
	TOTAL				962.53
	Add 15% for contractor's profit and overheads				144.38
	Cost of 10.00 sqm				1,106.91
	Cost of 1.00 sqm				110.69
	Say				110.70

13.9 Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.

13.9.1 12mm cement plaster.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement Mortar 1:3 (1 cement : 3 coarse sand) (Rate as per item no. 3-8)	cum	0.144	3,169.60	456.42
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				971.13
	Add 1 % for water charges				9.71
	TOTAL				980.84
	Add 15% for contractor's profit and overheads				147.13
	Cost of 10.00 sqm				1,127.97
	Cost of 1.00 sqm				112.80
	Say				112.80

13.9 Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.

13.9.2 20 mm cement plaster.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement Mortar 1:3 (1 cement : 3 coarse sand) (Rate as per item no. 3-8)	cum	0.224	3,169.60	709.99
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.25	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				1,325.72
	Add 1 % for water charges				13.26
	TOTAL				1,338.98
	Add 15% for contractor's profit and overheads				200.85
	Cost of 10.00 sqm				1,539.83
	Cost of 1.00 sqm				153.98
	Say				154.00

13.10 15 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the roughside of single or half brick wall.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement rnortar 1 : 3 (1 cement : 3 coarse sand) (Rate as per item no. 3.8)	cum	0.172	3,169.60	545.17
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.25	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				1,106.21
	Add 1 % for water charges				11.06
	TOTAL				1,117.27
	Add 15% for contractor's profit and overheads				167.59
	Cost of 10.00 sqm				1,284.86
	Cost of 1.00 sqm				128.49
	Say				128.50

13.11 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6mm thick cement plaster 1:6 (1 cement: 6 fine sand).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Under layer Cement mortar 1:5(1 cement: 5 coarse sand)	cum	0.144	2,260.15	325.46
	(Rate as per item no. 3.10)	cum	0.072	1,687.70	121.51
	Top layer cement mortar 1:6(1 cement: 6 fine sand). (Rate as per item 3.6)				
	LABOUR				
0155	Mason	Day	1.21	146.55	177.33
0115	Coolie	Day	1.29	135.25	174.47
0101	Bhisti	Day	1.05	138.45	145.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				956.75
	Add 1% for water charges				9.57
	TOTAL				966.32
	Add 15%for contractor's profit and overheads				144.95
	Cost of 10.00 sqm				1111.27
	Cost of 1.00 sqm				111.13
	Say				111.15

13.12 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer 6mm thick cement plaster 1:3(1 cement: 3 coarse sand) finished rough with sponge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Under layer Cement mortar 1:5(1 cement: 5 coarse sand) (Rate as per item no. 3.10)	cum	0.144	2,260.15	325.46
	Top layer cement mortar 1:3(1 cement: 3 coarse sand). (Rate as per item no. 3.8)	cum	0.072	3,169.60	228.21
	LABOUR				
0155	Mason	Day	1.21	146.55	177.33
0115	Coolie	Day	1.29	135.25	174.47
0101	Bhisti	Day	1.05	138.45	145.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				1,063.45
	Add 1 % for water charges				10.63
	TOTAL				1,074.08
	Add 15 % for contractor's profit and overheads				161.11
	Cost of 10.00 sqm				1,235.19
	Cost of 1.00 sqm				123.52
	Say				123.50

13.13 12 mm cement plaster 1 : 2 (1 cement : 2 stone dust)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:2 (Rate as per item no. 3.12)	cum	0.144	3,959.25	570.13
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.22	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				909.74
	Add 1% for water charges				9.10
	TOTAL				918.84
	Add 15 % for contractor's profit and overheads				137.83
	Cost of 10.00 sqm				1,056.67
	Cost of 1.00 sqm				105.67
	Say				105.65

13.14 15 mm cement plaster 1 : 2 (1 cement : 2 stone dust) on the rough side of single or half brick wall.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1 : 2	cum	0.172	3,959.25	680.99
	(Rate as per item no. 3.12)				
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0115	Coolie	Day	0.88	135.22	119.02
0101	Bhisti	Day	0.99	138.45	137.07
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				1,066.93
	Add 1% for water charges				10.67
	TOTAL				1,077.60
	Add 15 % for contractor's profit and overheads				161.64
	Cost of 10.00 sqm				1239.24
	Cost of 1.00 sqm				123.92
	Say				123.90

13.15 20 mm cement plaster 1 : 2 (1 cement : 2 stone dust)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:2	cum	0.224	3,959.25	886.87
	(Rate as per item no. 3.12)				
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.22	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				1,327.50
	Add 1% for water charges				13.28
	TOTAL				1,340.78
	Add 15 % for contractor's profit and overheads				201.12
	Cost of 10.00 sqm				1,541.90
	Cost of 1.00 sqm				154.19
	Say				154.20

13.16 6 mm cement plaster of mix:

13.16.1 1:3 (1 cement : 3 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3	cum	0.072	2,870.00	206.64
	(Rate as per item no. 3.3)				
	LABOUR				
0155	Mason	Day	0.51	146.55	74.74
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37

Code	Description	Unit	Quantity	Rate	Amount
9999	Extra for removing burrs, cleaning with wire brushes, pock making with pointed tool etc. complete.	L.S	13.39	1.00	13.39
9999	Scaffolding and sundries	L.S	11.70	1.00	11.70
	TOTAL				535.28
	Add 1% for water charges				5.35
	TOTAL				540.63
	Add 15 % for contractor's profit and overheads				81.09
	Cost of 10.00 sqm				621.72
	Cost of 1.00 sqm				62.17
	Say				62.15

13.17 6 mm cement plaster 1:3 (1 cement : 3 fine sand) Finished with a flooting coat of neat cement and thick coat of lime wash on top of walls when dry for bearing of R.C.C slabs and beams.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3 (Rate as per item no. 3.3)	cum	0.072	2,870.00	206.64
	LABOUR				
0155	Mason	Day	0.51	146.55	74.74
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Extra for removing burrs, cleaning with wire brushes, pock making with pointed tool etc. complete.	L.S	13.39	1.00	13.39
					11.70
9999	Scaffolding and sundries	L.S	11.70	1.00	
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
0776	Satna lime	quintal	0.01	178.00	1.78
9999	Indigo gum etc	L.S	2.08	1.00	2.08
9999	Sundries ladder etc.	L.S	0.52	1.00	0.52
0141	White Washer	Day	0.07	138.45	9.69
0115	Coolie	Day	0.07	135.25	9.47
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				736.65
	Add 1 % for water charges				7.37
	TOTAL				744.02
	Add 15% for contractor's profit and overheads				111.60
	Cost of 10.00 sqm				855.62
	Cost of 1.00 sqm				85.56
	Say				85.55

13.18 Neat cement punning

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0367	Cement	tonne	0.022	4,500.00	99.00
2209	Carriage of Cement	tonne	0.022	47.29	1.04
0155	Mason	Day	0.27	146.55	39.57
0115	Coolie	Day	0.27	135.25	36.52
9999	Scaffolding and sundries	L.S	8.06	1.00	8.06
	TOTAL				184.19
	Add 1% for water charges				1.84
	TOTAL				186.03
	Add 15 % for contractor's profit and overheads				27.90
	Cost of 10.00 sqm				213.93
	Cost of 1.00 sqm				21.39
	Say				21.40

13.19 Rough cast plaster upto 10m height above ground level with a mixture of sand and gravel or crushed stone from 6mm to 10mm nominal size dashed over and including the fresh plaster in two layers, under layer 12mm cement plaster 1:4 (1 cement: 4 coarse sand) and top layer 10mm cement plaster 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.

13.19.1 Ordinary cement finish using ordinary cement

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Under layer 12 mm thick cement plaster Cement mortar 1:4(1 cement: 4 coarse sand). (Rate as per item no. 3.9)	cum	0.144	2,578.45	371.30
0155	Mason	Day	0.67	146.55	98.19
0115	Beldar	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	9.88	1.00	9.88
	Top layer 10 mm thick cement plaster				
3.3	Cement mortar 1:3 (1 cement: 3 fine sand).	cum	0.12	2,870.00	344.40
0155	Mason	Day	0.61	146.55	89.40
0114	Beldar	Day	0.69	135.25	93.32
0101	Bhisti	Day	0.85	138.45	117.68
9999	Scaffolding and sundries	L.S	9.88	1.00	9.88
1179	Sand and gravel or crushed stone 6 mm to 10 mm size	cum	0.10	675.00	67.50
0101	Bhisti	Day	0.01	138.45	1.38
0777	Grounded hydrated lime (factory made)	quintal	0.09	177.00	15.93
9999	Carriage of lime	L.S	3.64	1.00	3.64
0155	Mason	Day	0.50	146.55	73.28
0114	Beldar	Day	0.50	135.25	67.62
0101	Bhisti	Day	0.10	138.45	13.84
9999	Scaffolding and sundries	L.S	9.88	1.00	9.88
	Labour for scooping				
0123	Mason 1st class	Day	0.25	151.50	37.88
0114	Beldar	Day	0.25	135.25	33.81
	TOTAL				1,687.62
	Add 1 % for water charges				16.88
	TOTAL				1,704.50

Code	Description	Unit	Quantity	Rate	Amount
	Add 15% for contractor's profit and overheads				255.68
	Cost of 10.00 sqm				1,960.18
	Cost of 1.00 sqm				196.02
	Say				196.00

13.20 Pebble dash plaster upto 10m height above ground level with a mixture of washed pebble or crushed stone 6mm to 12.5 mm nominal size dashed over and including the fresh plaster in two layers, under layer 12mm cement plaster 1:4 (1 cement: 4 coarse sand) and top layer 10mm cement plaster 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Under layer 12 mm thick cement plaster Cement mortar 1:4(1 cement: 4 coarse sand). (Rate as per item no. 3.9)	cum	0.144	2,578.45	371.30
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0114	Beldar	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	9.88	1.00	9.88
	Top layer 10 mm thick cement plaster Cement mortar 1:3 (1 cement: 3 fine sand). (Rate as per item no. 3.3)	cum	0.12	2,870.00	344.40
0155	Mason	Day	0.61	146.55	89.40
0114	Beldar	Day	0.69	135.25	93.32
0101	Bhisti	Day	0.85	138.45	117.68
9999	Scaffolding and sundries	L.S	9.88	1.00	9.88
1179	Sand and gravel or crushed stone 2.36 mm to 12.5 mm size	cum	0.10	675.00	67.50
0101	Bhisti	Day	0.01	138.45	1.38
0777	Grounded hydrated lime (factory made)	quintal	0.09	177.00	15.93
9999	Carriage of lime	L.S	3.64	1.00	3.64
0155	Mason	Day	0.50	146.55	73.28
0114	Beldar	Day	0.50	135.25	67.62
0101	Bhisti	Day	0.10	138.45	13.84
9999	Scaffolding and sundries	L.S	9.88	1.00	9.88
9999	Scaffolding and sundries	L.S	4.42	1.00	4.42
	TOTAL				1,620.35
	Add 1 % for water charges				16.20
	TOTAL				1,636.55
	Add 15% for contractor's profit and overheads				245.48
	Cost of 10.00 sqm				1,882.03
	Cost of 1.00 sqm				188.20
	Say				188.20

13.21 Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 12 mm cement plaster 1:3 (1 Cement: 3 sand) = 10 sqm. or 1.48 bags of cement used in the mix				
	Cement required for 10 sqm = 73.89 kg.				
	Water proofing material required @ 1 kg per				

Code	Description	Unit	Quantity	Rate	Amount
	50 kg of cement = 1.48 kg.				
1213	Water proofing materials	kilogram	1.48	20.00	29.60
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				36.75
	Add 1% for water charges				0.37
	TOTAL				37.12
	Add 15 % for contractor's profit and overheads				5.57
	Cost for 1.48 bags of cement used in the mix				42.69
	Cost for 1 bag of 50 kg cement used in the mix				28.84
	Say				28.85

13.22 Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
9999	Scaffolding and sundries	L.S	53.82	1.00	53.82
	LABOUR				
0155	Mason	Day	0.20	146.55	29.31
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.10	138.45	13.84
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				144.69
	Add 1% for water charges				1.45
	TOTAL				146.14
	Add 15% for contractor's profit and overheads				21.92
	Cost of 10.00 sqm				168.06
	Cost of 1.00 sqm				16.81
	Say				16.80

13.23 Extra for plastering on circular work not exceeding 6 m in radius:

13.23.1 In one coat

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	0.20	146.55	29.31
0114	Beldar	Day	0.20	135.25	27.05
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				63.51
	Add 1% for water charges				0.64
	TOTAL				64.15
	Add 15% for contractor's profit and overheads				9.62
	Cost of 10.00 sqm				73.77
	Cost of 1.00 sqm				7.38
	Say				7.40

13.23 Extra for plastering on circular work not exceeding 6 m in radius:

13.23.2 In two coat

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	0.30	146.55	43.96
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				97.92
	Add 1% for water charges				0.98
	TOTAL				98.90
	Add 15% for contractor's profit and overheads				14.84
	Cost of 10.00 sqm				113.74
	Cost of 1.00 sqm				11.37
	Say				11.35

13.24 Extra for plastering done on moulding cornices or architraves including neat finish to line and level:

13.24.1 In one coat

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	3.00	146.55	439.65
0114	Beldar	Day	2.00	135.25	270.50
0115	Coolie	Day	1.00	135.25	135.25
0101	Bhisti	Day	0.25	138.45	34.61
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				893.40
	Add 1% for water charges				8.93
	TOTAL				902.33
	Add 15% for contractor's profit and overheads				135.35
	Cost of 10.00 sqm				1,037.68
	Cost of 1.00 sqm				103.77
	Say				103.75

13.24 Extra for plastering done on moulding cornices or architraves including neat finish to line and level:

13.24.2 In two coats

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	5.00	146.55	732.75
0114	Beldar	Day	3.00	135.25	405.75
0115	Coolie	Day	2.00	135.25	270.50
0101	Bhisti	Day	0.33	138.45	45.69
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				1,468.08
	Add 1% for water charges				14.68
	TOTAL				1,482.76
	Add 15% for contractor's profit and overheads				222.41
	Cost of 10.00 sqm				1,705.17
	Cost of 1.00 sqm				170.52
	Say				170.50

13.25 Extra for plastering
13.25.1 Spherical ceiling

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	0.75	146.55	109.91
0114	Beldar	Day	0.74	135.25	100.08
9999	Sundries	L.S	26.91	1.00	26.91
	TOTAL				236.90
	Add 1% for water charges				2.37
	TOTAL				239.27
	Add 15% for contractor's profit and overheads				35.89
	Cost of 10.00 sqm				275.16
	Cost of 1.00 sqm				27.52
	Say				27.50

13.25 Extra for plastering
13.25.2 Groined ceiling

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	0.80	146.55	117.24
0114	Beldar	Day	0.80	135.25	108.20
9999	Sundries	L.S	34.06	1.00	34.06
	TOTAL				259.50
	Add 1% for water charges				2.60
	TOTAL				262.10
	Add 15% for contractor's profit and overheads				39.32
	Cost of 10.00 sqm				301.42
	Cost of 1.00 sqm				30.14
	Say				30.15

13.25 Extra for plastering
13.25.3 Flewing ceiling

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	0.50	146.55	73.28
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				154.29
	Add 1% for water charges				1.54
	TOTAL				155.83
	Add 15% for contractor's profit and overheads				23.37
	Cost of 10.00 sqm				179.20
	Cost of 1.00 sqm				17.92
	Say				17.90

13.26 Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Plaster of paris 10x0.002x1121 = 22.42kg				
	Add 20% wastage= 0.45kg				
	Total = 22.45kg				
	Say23kg				
0869	Plaster of Paris	kilogram	23.00	2.50	57.50
9999	Carriage of plaster of paris	L.S	3.90	1.00	3.90
	LABOUR				
0122	Mason special	Day	0.91	151.50	137.86
0114	Beldar	Day	0.91	135.25	123.08
9999	Scaffolding and sundries	L.S	83.98	1.00	83.98
	TOTAL				406.32
	Add 1 % for water charges				4.06
	TOTAL				410.38
	Add 15% for contractor's profit and overheads				61.56
	Cost of 10.00 sqm				471.94
	Cost of 1.00 sqm				47.19
	Say				47.20

13.27 Extra for lining out plaster to imitate stone or concrete blocks walling

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0155	Mason	Day	0.50	146.55	73.28
0114	Beldar	Day	0.50	135.25	67.62
9999	Solution of lime putty	L.S	1.82	1.00	1.82
	TOTAL				142.72
	Add 1% for water charges				1.43
	TOTAL				144.15
	Add 15% for contractor's profit and overheads				21.62
	Cost of 10.00 sqm				165.77
	Cost of 1.00 sqm				16.58
	Say				16.60

13.28 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand):

13.28.1 Flush Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1 : 4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.014	2,278.85	31.90
	LABOUR				
0155	Mason	Day	0.27	146.55	39.57

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.27	135.25	36.52
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S	1.43	1.00	1.43
	TOTAL				116.34
	Add 1% for water charges				1.16
	TOTAL				117.50
	Add 15% for contractor's profit and overheads				17.62
	Cost of 10.00 metre long and 10 cm wide band				135.12
	Cost of 1.00 metre long and 1 cm wide band				1.35
	Say				1.35

13.28 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand):
13.28.2 Sunk Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.014	2,278.85	31.90
	LABOUR				
0155	Mason	Day	0.30	146.55	43.96
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S	2.08	1.00	2.08
	TOTAL				125.43
	Add 1% for water charges				1.25
	TOTAL				126.68
	Add 15% for contractor's profit and overheads				19.00
	Cost of 10.00 metre long and 10 cm wide band				145.68
	Cost of 1.00 metre long and 1 cm wide band				1.46
	Say				1.45

13.28 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand):
13.28.3 Raised Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.014	2,278.85	31.90
	LABOUR				
0155	Mason	Day	0.35	146.55	51.29
0115	Coolie	Day	0.35	135.25	47.34
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S	2.73	1.00	2.73

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				140.18
	Add 1% for water charges				1.40
	TOTAL				141.58
	Add 15 % for contractor's profit and overheads				21.24
	Cost of 10.00 metre long and 10 cm wide band				162.82
	Cost of 1.00 metre long and 1 cm wide band				1.63
	Say				1.65

13.28 12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand):
13.28.4 Moulded Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (Rate as per item No 3.4)				
	LABOUR	cum	0.014	2,278.85	31.90
0155	Mason	Day	0.65	146.55	95.26
O115	Coolie	Day	0.65	135.25	87.91
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S.	1.56	1.00	1.56
	TOTAL				223.55
	Add 1 % for water charges				2.24
	TOTAL				225.79
	Add15% for contractor's profit and overheads				33.87
	Cost of 10.00 metre long and 10 cm wide band				259.66
	Cost of 1.00 metre long and 1 cm wide band				2.60
	Say				2.60

13.29 18 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand):
13.29.1 Flush Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (Rate as per item no. 3.4)	cum	0.02	2,278.85	45.58
	LABOUR				
0155	Mason	Day	0.32	146.55	46.90
0115	Coolie	Day	0.32	135.25	43.28
0101	Bhisti	Day	0.06	138.45	8.31
9999	Sundries	L.S	2.08	1.00	2.08
	TOTAL				146.15
	Add 1% for water charges				1.46
	TOTAL				147.61
	Add 15% for contractor's profit and overheads				22.14
	Cost of 10.00 metre long and 10 cm wide band				169.75
	Cost of 1.00 metre long and 1 cm wide band				1.70
	Say				1.70

13.29 18 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand): 13.29.2 Sunk Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (rate as per item no. 3.4)	cum	0.02	2,278.85	45.58
	LABOUR				
0155	Mason	Day	0.36	146.55	52.76
0115	Coolie	Day	0.36	135.25	48.69
0101	Bhisti	Day	0.06	138.45	8.31
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				158.07
	Add 1% for water charges				1.58
	TOTAL				159.65
	Add 15% for contractor's profit and overheads				23.95
	Cost of 10.00 metre long and 10 cm wide band				183.60
	Cost of 1.00 metre long and 1 cm wide band				1.84
	Say				1.85

13.29 18 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand): 13.29.3 Raised Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (rate as per item no. 3.4)	cum	0.02	2,278.85	45.58
	LABOUR				
0155	Mason	Day	0.42	146.55	61.55
0115	Coolie	Day	0.42	135.25	56.80
0101	Bhisti	Day	0.06	138.45	8.31
9999	Sundries	L.S	4.42	1.00	4.42
	TOTAL				176.66
	Add 1% for water charges				1.77
	TOTAL				178.43
	Add 15% for contractor's profit and overheads				26.76
	Cost of 10.00 metre long and 10 cm wide band				205.19
	Cost of 1.00 metre long and 1 cm wide band				2.05
	Say				2.05

13.29 18 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement: 4 fine sand): 13.29.4 Moulded Band

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand). (rate as per item no. 3.4)	cum	0.024	2,278.85	54.69
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0155	Mason	Day	0.86	146.55	126.03
0115	Coolie	Day	0.86	135.25	116.32
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				306.69
	Add 1% for water charges				3.07
	TOTAL				309.76
	Add 15% for contractor's profit and overheads				46.46
	Cost of 10.00 metre long and 10 cm wide band				356.22
	Cost of 1.00 metre long and 1 cm wide band				3.56
	Say				3.55

13.30 18 mm thick moulded cement mortar band in two coats under layer 12mm thick with cement mortar 1:5 (1cement: 5 coarse sand) top layer 6mm thick with cement mortar 1:4 (1 cement: 4 fine sand). .

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre long and 10 cm wide band				
	MATERIALS				
	Cement mortar 1:5 (1 cement: 5 coarse sand).	cum	0.014	2,260.15	31.64
	(rate as per item no. 3.10)		0.01	2278.85	22.79
	Cement morter 1:4 (1 cement: 4 fine sand).	cum			
	(rate as per item no. 3.4)				
	LABOUR				
0155	Mason	Day	0.86	146.55	126.03
0115	Coolie	Day	0.86	135.25	116.32
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				306.43
	Add 1 % for water charges				3.06
	TOTAL.				309.49
	Add 15% for contractor's profit and overheads				46.42
	Cost of 1 metre long and 10 cm wide band				355.91
	Cost of 1.00 metre long and 1 cm wide band				3.56
	Say				3.55

13.31 Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement: 3 fine sand):

13.31.1 Flush / Ruled/ Struck or weathered pointing.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3 (1 cement: 3 fine sand).	cum	0.03	2,870.00	86.10
	(rate as per item no. 3.3)				
	LABOUR				
0155	Mason	Day	0.50	146.55	73.28
0115	Coolie	Day	0.60	135.25	81.15
0101	Bhisti	Day	0.93	138.45	128.76
9999	Sundries	L.S	7.15	1.00	7.15
9999	Scaffolding and racking out joints including sundries	L.S	14.30	1.00	14.30
	TOTAL				390.74

Code	Description	Unit	Quantity	Rate	Amount
	Add 1 % for water charges				3.91
	TOTAL.				394.65
	Add 15% for contractor's profit and overheads				59.20
	Cost of 10 sqm.				453.85
	Cost of 1.00 sqm.				45.39
	Say				45.40

13.31 Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement: 3 fine sand):

13.31.2 Raised and cut pointing.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3 (1 cement: 3 fine sand). (rate as per item no. 3.3)	cum	0.046	2,870.00	132.02
	LABOUR				
0155	Mason	Day	1.07	146.55	156.81
0115	Coolie	Day	1.31	135.25	177.18
0101	Bhisti	Day	1.00	138.45	138.45
9999	Sundries	L.S	7.15	1.00	7.15
9999	Scaffolding and racking out joints including sundries	L.S	16.12	1.00	16.12
	TOTAL				627.73
	Add 1 % for water charges				6.28
	TOTAL.				634.01
	Add 15% for contractor's profit and overheads				95.10
	Cost of 10 sqm.				729.11
	Cost of 1.00 sqm.				72.91
	Say				72.90

13.32 Pointing on tile brick work with cement mortar 1:3 (1 cement :3 fine sand):

13.32.1 Flush/Ruled/Struck or weathered pointing

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3 (1 cement: 3 fine sand). (rate as per item no. 3.3)	cum	0.046	2,870.00	132.02
9999	Sundries	L.S	7.15	1.00	7.15
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.80	135.25	108.20
0101	Bhisti	Day	1.28	138.45	177.22
9999	Scaffolding and racking out joints including sundries	L.S	16.12	1.00	16.12
	TOTAL				538.90
	Add 1 % for water charges				5.39
	TOTAL.				544.29
	Add 15% for contractor's profit and overheads				81.64
	Cost of 10 sqm.				625.93
	Cost of 1.00 sqm				62.59
	Say				62.60

13.33 Pointing on stone work with cement mortar 1:3 (1 cement :3 fine sand):
13.33.1 Flush/Ruled pointing

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3 (1 cement: 3 fine sand). (rate as per item no. 3.3)	cum	0.023	2,870.00	66.01
9999	Sundries	L.S	7.15	1.00	7.15
	LABOUR				
0155	Mason	Day	0.92	146.55	134.83
0115	Coolie	Day	1.37	135.25	185.29
0101	Bhisti	Day	0.93	138.45	128.76
9999	Scaffolding and racking out joints including sundries	L.S	16.12	1.00	16.12
	TOTAL				538.16
	Add 1 % for water charges				5.38
	TOTAL.				543.54
	Add 15% for contractor's profit and overheads				81.53
	Cost of 10 sqm.				625.07
	Cost of 1.00 sqm.				62.51
	Say				62.50

13.33 Pointing on stone work with cement mortar 1:3 (1 cement :3 fine sand):
13.33.2 Raised and cut pointing

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:3 (1 cement: 3 fine sand). (rate as per item no. 3.3)	cum	0.038	2,870.00	109.06
9999	Sundries	L.S	7.15	1.00	7.15
	LABOUR				
0155	Mason	Day	2.00	146.55	293.10
0115	Coolie	Day	2.96	135.25	400.34
0101	Bhisti	Day	1.00	138.45	138.45
9999	Scaffolding and racking out joints including sundries	L.S	16.12	1.00	16.12
	TOTAL				964.22
	Add 1 % for water charges				9.64
	TOTAL.				973.86
	Add 15% for contractor's profit and overheads				146.08
	Cost of 10 sqm.				1,119.94
	Cost of 1.00 sqm.				111.99
	Say				112.00

13.34 Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	White Cement mortar 1:3 (1 white cement : 3 marble dust. (rate as per item no. 3.16)	cum	0.038	6,035.60	229.35
9999	Sundries	L.S	7.15	1.00	7.15
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0155	Mason	Day	2.00	146.55	293.10
0115	Coolie	Day	2.96	135.25	400.34
0101	Bhisti	Day	1.00	138.45	138.45
9999	Scaffolding and racking out joints including sundries	L.S	16.12	1.00	16.12
	TOTAL				1084.51
	Add 1 % for water charges				10.85
	TOTAL.				1095.36
	Add 15% for contractor's profit and overheads				164.30
	Cost of 10 sqm.				1259.66
	Cost of 1.00 sqm.				125.97
	Say				125.95

13.35 Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine dust)

13.35.1 Flush/Ruled pointed

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
	Cement mortar 1:2 (1 cement : 2 fine sand) (rate as per item no. 3.2)	cum	0.015	3,598.25	53.97
	LABOUR				
0155	Mason	Day	0.47	146.55	68.88
0115	Coolie	Day	0.69	135.25	93.32
0101	Bhisti	Day	0.59	138.45	81.69
9999	Scaffolding and racking out joints including sundries	L.S	16.12	1.00	16.12
	TOTAL				313.98
	Add 1 % for water charges				3.14
	TOTAL.				317.12
	Add 15% for contractor's profit and overheads				47.57
	Cost of 10 sqm				364.69
	Cost of 1.00 sqm				36.47
	Say				36.45

13.36 Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
9999	Scaffolding	L.S	13.39	1.00	13.39
9999	sundries	L.S	13.39	1.00	13.39
	TOTAL				26.78
	Add 1 % for water charges				0.27
	TOTAL.				27.05
	Add 15% for contractor's profit and overheads				4.06
	Cost of 10 sqm				31.11
	Cost of 1.00 sqm				3.11
	Say				3.10

13.37 White washing with lime to give an even shade: —

13.37.1 New work (three or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0775	Dehradun white lime	quintal	0.03	295.00	8.85
9999	Carriage of lime	L.S	0.91	1.00	0.91
	LABOUR				
0141	White Washer	Day	0.20	138.45	27.69
0115	Coolie	Day	0.10	135.25	13.52
9999	Indigo gum etc	L.S	4.42	1.00	4.42
9999	Sundries ladders etc	L.S	2.73	1.00	2.73
	TOTAL				58.12
	Add 1 % for water charges				0.58
	TOTAL				58.70
	Add 15% for contractor's profit and overheads				8.80
	Cost of 10 sqm				67.50
	Cost of 1.00 sqm				6.75
	Say				6.75

13.38 Satna lime wash on walls one coat

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0776	Satna lime	quintal	0.01	178.00	1.78
9999	Carriage of lime	L.S	2.08	1.00	2.08
9999	Indigo gum etc	L.S	0.52	1.00	0.52
	LABOUR				
0141	White Washer	Day	0.08	138.45	11.08
0115	Coolie	Day	0.04	135.25	5.41
9999	Sundries ladders etc	L.S	2.73	1.00	2.73
	TOTAL				23.60
	Add 1 % for water charges				0.24
	TOTAL				23.84
	Add 15% for contractor's profit and overheads				3.58
	Cost of 10 sqm				27.42
	Cost of 1.00 sqm				2.74
	Say				2.75

13.39 Colour washing such as green, blue or buff to give an even shade : ,—

13.39.1 New work (two or more coats) with a base coat of white washing with lime

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0775	Dehradun white lime	quintal	0.03	295.00	8.85
9999	Carriage of lime	L.S	8.06	1.00	8.06
9999	Add for colouring stuff	L.S	0.91	1.00	0.91
	LABOUR				
0141	White Washer	Day	0.30	138.45	41.54
0115	Coolie	Day	0.10	135.25	13.52
9999	Indigo gum etc	L.S	4.42	1.00	4.42
9999	Sundries ladders etc	L.S	2.73	1.00	2.73

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				80.03
	Add 1 % for water charges				0.80
	TOTAL				80.83
	Add 15% for contractor's profit and overheads				12.12
	Cost of 10 sqm				92.95
	Cost of 1.00 sqm				9.30
	Say				9.30

13.39 Colour washing such as green, blue or buff to give an even shade : ,—

13.39.2 New work (two or more coats) with a base coat of whiting

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0775	Dehradun white lime	quintal	0.03	295.00	8.85
9999	Carriage of lime	L.S	8.06	1.00	8.06
9999	Add for colouring stuff	L.S	0.91	1.00	0.91
	LABOUR				
0141	White Washer	Day	0.30	138.45	41.54
0115	Coolie	Day	0.10	135.25	13.52
9999	Indigo gum etc	L.S	2.73	1.00	2.73
9999	Sundries ladders etc	L.S	2.73	1.00	2.73
	TOTAL				78.34
	Add 1 % for water charges				0.78
	TOTAL				79.12
	Add 15% for contractor's profit and overheads				11.87
	Cost of 10 sqm				90.99
	Cost of 1.00 sqm				9.10
	Say				9.10

13.40 Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whiting to give an even shade:-

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
1216	Whiting	quintal	0.01	329.00	3.29
9999	Putty, glue etc	L.S	2.73	1.00	2.73
	For distempering				
0815	Dry distemper	kilogram	1.50	26.00	39.00
9999	Carriage of material	L.S	1.56	1.00	1.56
9999	Brushes, sand paper etc	L.S	7.15	1.00	7.15
	LABOUR				
0131	Painter	Day	0.80	141.60	113.28
0115	Coolie	Day	0.40	135.25	54.10
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				226.44
	Add 1 % for water charges				2.26
	TOTAL				228.70
	Add 15% or contractor's profit and overheads				34.30
	Cost of 10.00 sqm				263.00
	Cost of 1.00 sqm				26.30
	Say				26.30

13.41 Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade

13.41.1 New work (two or more coats) over and including priming coat with cement primer:-

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0820	Cement primer	litre	0.70	70.00	49.00
9999	Brushes, putty etc	L.S.	7.15	1.00	7.15
9999	Sundries including Carriage	L.S.	8.06	1.00	8.06
0816	Dry distemper	kilogram	1.50	40.00	60.00
9999	Carriage of material	L.S.	4.42	1.00	4.42
9999	Brushes, sand paper and putty for filling holes	L.S.	11.70	1.00	11.70
	LABOUR				
0131	Painter	Day	1.00	141.60	141.60
0115	Coolie	Day	0.50	135.25	67.62
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				357.61
	Add 1 % for water charges				3.58
	TOTAL				361.19
	Add 15% for contractor's profit and overheads				54.18
	Cost of 10.00 sqm				415.37
	Cost of 1.00 sqm				41.54
	Say				41.55

13.42 Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete, as per manufacturer's specification.

13.42.1 Two or more coats on new work.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0816	Oil bound washable distemper	kilogram	1.50	40.00	60.00
9999	Carriage of material	L.S.	4.42	1.00	4.42
9999	Brushes, sand paper and putty for filling holes	L.S.	11.57	1.00	11.57
	LABOUR				
0131	Painter	Day	0.40	141.60	56.64
0114	Beldar	Day	0.46	135.25	62.22
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				202.91
	Add 1 % for water charges				2.03
	TOTAL				204.94
	Add 15% for contractor's profit and overheads				30.74
	Cost of 10.00 sqm				235.68
	Cost of 1.00 sqm				23.57
	Say				23.55

13.43 Applying one coat of cement primer of approved brand and manufacture on wall surface

13.43.1 Cement primer

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0820	Cement primer	quintal	0.70	70.00	49.00
9999	Brushes, putty etc	L.S	7.15	1.00	7.15
	LABOUR				
0131	Painter	Day	0.40	141.60	56.64
0115	Coolie	Day	0.20	135.25	27.05
9999	Sundries including carriage	L.S	8.06	1.00	8.06
	TOTAL				147.90
	Add 1 % for water charges				1.48
	TOTAL				149.38
	Add 15% for contractor's profit and overheads				22.41
	Cost of 10.00 sqm				171.79
	Cost of 1.00 sqm				17.18
	Say				17.20

13.44 Finishing walls with water proofing cement paint of required shade

13.44.1 New work (Two or more coats applied @ 3.84 kg/10 sqm).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0851	Water proofing cement paint	kilogram	3.84	36.00	138.24
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.46	141.60	65.14
0115	Coolie	Day	0.23	135.25	31.11
0101	Bhisti	Day	0.10	138.45	13.84
9999	Brushes, sand paper etc	L.S	7.15	1.00	7.15
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				265.10
	Add 1 % for water charges				2.65
	TOTAL				267.75
	Add 15% for contractor's profit and overheads				40.16
	Cost of 10.00 sqm				307.91
	Cost of 1.00 sqm				30.79
	Say				30.80

13.45 Finishing walls with textured exterior paint of required shade :

13.45.1 New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8507	Textured exterior paint	litre	3.28	183.00	600.24
0851	Water proofing cement paint	kilogram	2.20	36.00	79.20
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.05	138.45	6.92
	Brushes, sand paper etc	L.S	7.02	1.00	7.02
	Sundries	L.S	8.06	1.00	8.06
	TOTAL				828.53
	Add 1 % for water charges				8.29
	TOTAL				836.82
	Add 15% for contractor's profit and overheads				125.52
	Cost of 10.00 sqm				962.34
	Cost of 1.00 sqm				96.23
	Say				96.25

13.46 Finishing walls with Acrylic Smooth exterior paint of required shade : —

13.46.1 New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8505	Acrylic exterior paint	litre	1.67	123.00	205.41
0851	Water proofing cement paint	kilogram	2.20	36.00	79.20
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.05	138.45	6.92
9999	Brushes, sand paper etc	L.S	7.15	1.00	7.15
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				433.83
	Add 1 % for water charges				4.34
	TOTAL				438.17
	Add 15% for contractor's profit and overheads				65.73
	Cost of 10.00 sqm				503.90
	Cost of 1.00 sqm				50.39
	Say				50.40

13.47 Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade —

13.47.1 New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8506	Premium Acrylic exterior paint	litre	1.43	202.00	288.86
0851	Water proofing cement paint	kilogram	2.20	36.00	79.20
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.30	135.25	40.57

Code	Description	Unit	Quantity	Rate	Amount
0101	Bhisti	Day	0.05	138.45	6.92
9999	Brushes, sand paper etc	L.S	7.15	1.00	7.15
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				517.28
	Add 1% for water charges				5.17
	TOTAL				522.45
	Add 15% or contractor's profit and overheads				78.37
	Cost of 10.00 sqm				600.82
	Cost of 1.00 sqm				60.08
	Say				60.10

13.48 Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as permanufacturers specifications :

13.48.1 Two or more coats applied @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @0.75 ltr/10 sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8504	Multi surface paint	litre	1.25	264.00	330.00
8509	Special Primer	litre	0.75	76.00	57.00
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.05	138.45	6.92
9999	Brushes, sand paper etc	L.S	7.02	1.00	7.02
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				536.09
	Add 1% for water charges				5.36
	TOTAL				541.45
	Add 15% for contractor's profit and overheads				81.22
	Cost of 10.00 sqm				622.67
	Cost of 1.00 sqm				62.27
	Say				62.25

13.48 Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :

13.48.2 Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/ 10 sqm of approved brand or manufacture

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8504	Multi surface paint	litre	0.90	264.00	237.60
8509	Special Primer	litre	0.75	76.00	57.00
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.05	138.45	6.92

Code	Description	Unit	Quantity	Rate	Amount
9999	Brushes, sand paper etc	L.S	7.02	1.00	7.02
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				443.69
	Add 1% for water charges				4.44
	TOTAL				448.13
	Add 15% for contractor's profit and overheads				67.22
	Cost of 10.00 sqm				515.35
	Cost of 1.00 sqm				51.54
	Say				51.55

13.48 Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :

13.48.3 Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @0.80 ltr/ 10 sqm of approved brand or manufacture

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8504	Multi surface paint	litre	0.90	264.00	237.60
8510	Metal Primer	litre	0.80	91.00	72.80
9999	Carriage of material	L.S	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.05	138.45	6.92
9999	Brushes, sand paper etc	L.S	7.02	1.00	7.02
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				459.49
	Add 1% for water charges				4.59
	TOTAL				464.08
	Add 15% for contractor's profit and overheads				69.61
	Cost of 10.00 sqm				533.69
	Cost of 1.00 sqm				53.37
	Say				53.35

13.49 Extra for applying water proofing cement paint as primer applied @ 2.2 kg/10 sqm instead of primer for exterior finishing in Item No. 13.48.1

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	Water proofing material required for 10 sqm = 2.20 kg				
	Primer required 10 sqm = 0.75 litres				
0851	Water proofing cement paint	kilogram	2.20	36.00	79.20
8509	Special Primer	litre	0.75	76.00	-57.00
	Difference of Cost				22.20
	Add 1 % for water charges				0.22
	TOTAL				22.42
	Add15% for contractor's profit and overheads				3.36
	Cost of 10.00 sqm				25.78
	Cost of 1.00 sqm				2.58
	Say				2.60

13.50 Applying priming coat:-

13.50.1 With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0823	Primer	litre	0.75	72.00	54.00
9999	Putty	L.S.	2.73	1.00	2.73
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40
0115	Coolie	Day	0.25	135.25	33.81
9999	Brushes, sand paper etc	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	10.79	1.00	10.79
	TOTAL				142.45
	Add 1% for water charges				1.42
	TOTAL				143.87
	Add 15% for contractor's profit and overheads				21.58
	Cost of 10.00 sqm				165.45
	Cost of 1.00 sqm				16.55
	Say				16.55

13.50 Applying priming coat:-

13.50.2 With ready mixed aluminium primer of approved brand and manufacture or resinous wood and plywood.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
4201	Aluminium primer	litre	0.75	63.00	47.25
9999	Putty	L.S.	2.73	1.00	2.73
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40
0115	Coolie	Day	0.25	135.25	33.81
9999	Brushes, sand paper etc	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	10.79	1.00	10.79
	TOTAL				135.70
	Add 1% for water charges				1.36
	TOTAL				137.06
	Add 15% for contractor's profit and overheads				20.56
	Cost of 10.00 sqm				157.62
	Cost of 1.00 sqm				15.76
	Say				15.75

13.50 Applying priming coat:

13.50.3 With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works:-

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
4202	Red oxide Zinc chromate yellow primer	litre	0.54	58.00	31.32
9999	Carriage	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.24	141.60	33.98

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.24	135.25	32.46
9999	Brushes,sand paper including sundries	L.S.	10.79	1.00	10.79
	TOTAL				109.07
	Add 1% for water charges				1.09
	TOTAL				110.16
	Add 15% for contractor's profit and overheads				16.52
	Cost of 10.00 sqm				126.68
	Cost of 1.00 sqm				12.67
	Say				12.65

13.50 Applying priming coat:

13.50.4 With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
4202	Red oxide Zinc chromate yellow primer	litre	0.36	58.00	20.88
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.12	141.60	16.99
0115	Coolie	Day	0.12	135.25	16.23
9999	Brushes,sand paper including	L.S.	7.15	1.00	7.15
	TOTAL				61.64
	Add 1 % for water charges				0.62
	TOTAL				62.26
	Add 15% for contractor's profit and overheads				9.34
	Cost of 10.00 sqm				71.60
	Cost of 1.00 sqm				7.16
	Say				7.15

13.51 Painting one thin coat with white lead of approved brand and manufacture on wet or patchy portion of plastered surfaces

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0850	White lead	kilogram	0.86	60.00	51.60
0818	Linseed oil (double boiled)	litre	0.61	80.00	48.80
9999	Carriage of material	L.S	0.52	1.00	0.52
9999	Putty etc	L.S	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.27	141.60	38.23
0115	Coolie	Day	0.27	135.25	36.52
9999	Brushes, sand paper etc	L.S	5.33	1.00	5.33
9999	Sundries	L.S	10.79	1.00	10.79
	TOTAL				194.52
	Add 1% for water charges				1.95
	TOTAL				196.47
	Add 15% for contractor's profit and overheads				29.47
	Cost of 10.00 sqm				225.94
	Cost of 1.00 sqm				22.59
	Say				22.60

13.52 Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer' specifications including appropriate priming coat, preparation of surface, etc. complete.

13.52.1 On Steel work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	PRIMING COAT				
	MATERIALS				
4202	Primer	litre	0.75	58.00	43.50
9999	Putty	L.S	2.73	1.00	2.73
9999	Carriage	L.S	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40
0115	Coolie	Day	0.25	135.25	33.81
9999	Brushes, sand paper etc	L.S.	5.46	1.00	5.46
9999	Sundries	L.S.	10.66	1.00	10.66
	EPOXY PAINTING				
	MATERIALS				
7239	Epoxy paint	litre	1.25	280.00	350.00
9999	Carriage of material	L.S.	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Putty, brushes, sand paper etc	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				647.70
	Add 1% for water charges				6.48
	TOTAL				654.18
	Add 15% for contractor's profit and overheads				98.13
	Cost of 10.00 sqm				752.31
	Cost of 1.00 sqm				75.23
	Say				75.25

13.52 Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete:-

13.52.2 On concrete work:-

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	PRIMING COAT				
	MATERIALS				
0821	Primer	litre	0.84	73.00	61.32
9999	Putty	L.S.	13.52	1.00	13.52
9999	Carriage	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40
0115	Coolie	Day	0.25	135.25	33.81
9999	Brushes, sand paper etc	L.S.	2.73	1.00	2.73
9999	Sundries	L.S	8.06	1.00	8.06
	EPOXY PAINTING				
	MATERIALS				
7239	Epoxy paint	litre	1.21	280.00	338.80
9999	Materials for filling in holes and cracks (putty etc)	L.S.	6.76	1.00	6.76
9999	Carriage of material	L.S.	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.54	135.25	73.04
9999	Putty, brushes, sand paper etc	L.S	10.79	1.00	10.79
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				669.40
	Add 1% for water charges				6.69
	TOTAL				676.09
	Add 15% for contractor's profit and overheads				101.41
	Cost of 10.00 sqm				777.50
	Cost of 1.00 sqm				77.75
	Say				77.75

13.53 Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade : -

13.53.1 New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	PRIMING COAT				
	MATERIALS				
4202	Steel primer	litre	0.36	58.00	20.88
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.12	141.60	16.99
0114	Beldar	Day	0.12	135.25	16.23
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
	EPOXY PAINTING				
	MATERIALS				
0834	Synthetic enamel paint	litre	0.80	120.00	96.00
9999	Carriage	L.S.	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Putty, brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				323.39
	Add 1% for water charges				3.23
	TOTAL				326.62
	Add 15% for contractor's profit and overheads				48.99
	Cost of 10.00 sqm				375.61
	Cost of 1.00 sqm				37.56
	Say				37.55

13.54 Applying a coat of mordant solution on G.S. sheet

13.54.1 With a solution of 38 gms of copper acetate in a litre of soft water

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 25 sqm				
	MATERIALS				
4203	Copper acetate	kilogram	0.038	228.00	8.66
9999	Soft Water	L.S.	1.82	1.00	1.82
9999	Carriage	L.S	0.91	1.00	0.91
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.60	135.25	81.15
9999	Brushes, sand paper etc	L.S	35.88	1.00	35.88
9999	Sundries	L.S	35.88	1.00	35.88

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				249.26
	Add 1 % for water charges				2.49
	TOTAL				251.75
	Add 15% or contractor's profit and overheads				37.76
	Cost of 25 sqm				289.51
	Cost of 1.00 sqm				11.58
	Say				11.60

13.54 Applying a coat of mordant solution on G.S. sheet

13.54.2 With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride,. copper nitrate and ammonium chloride dissolved in a litre of soft water.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 25 sqm				
	MATERIALS				
4204	Hydrochloric acid	kilogram	0.013	27.00	0.35
4205	Copper chloride	kilogram	0.013	244.00	3.17
4206	Copper nitrate	kilogram	0.013	173.00	2.25
4207	Ammonium chloride	kilogram	0.013	12.00	0.16
9999	Soft Water	L.S.	1.82	1.00	1.82
9999	Carriage	L.S.	0.91	1.00	0.91
	LABOUR				
0131	Painter	Day	0.60	141.60	84.96
0115	Coolie	Day	0.60	135.25	81.15
9999	Brushes, sand paper etc	L.S	35.88	1.00	35.88
9999	Sundries	L.S	35.88	1.00	35.88
	TOTAL				246.53
	Add 1 % for water charges				2.47
	TOTAL				249.00
	Add 15% for contractor's profit and overheads				37.35
	Cost of 25 sqm				286.35
	Cost of 1.00 sqm				11.45
	Say				11.45

13.55 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming coat of readymixed zinc chromate yellow primer on new work : -—

13.55.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Area=22/7x106.4mm x30m=10.032sqm				
	MATERIALS				
4202	Zinc chromate red oxide primer	litre	0.54	58.00	31.32
9999	Carriage	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.24	141.60	33.98
0115	Coolie	Day	0.24	135.25	32.46
9999	Brushes, sand paper etc	L.S.	10.79	1.00	10.79
	MATERIALS				
0828	Anticorrosive bituminous paint (black)	litre	0.95	52.00	49.40
9999	Carriage	L.S.	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.54	135.25	73.04
9999	Putty, sand paper etc	L.S	5.33	1.00	.5.33
9999	Sundries	L.S	8.06	1.00	8.06
9999	Wire brushes for cleaning	L.S	5.33	1.00	5.33
9999	Extra for delays	L .S	61.10	1.00	61.10
	TOTAL				389.22
	Add 1% for water charges				3.89
	TOTAL				393.11
	Add 15% for contractor's profit and overheads				58.97
	Cost of 30.00 mtrs				452.08
	Cost of 1.00 metre				15.07
	Say				15.05

13.55 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming of ready mixed zinc chromate yellow primer on new work

13.55.2 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Area=22/7 x 0.15720 x 30 m = 14.82 sqm.				
	MATERIALS				
4202	Zinc chromate red oxide primer	litre	0.8	58.00	46.40
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand paper etc	L.S	15.99	1.00	15.99
9999	Carriage	L.S	0.91	1.00	0.91
	MATERIALS				
0828	Anticorrosive bituminous paint (black)	litre	1.41	52.00	73.32
9999	Carriage	L.S	2.08	1.00	2.08
	LABOUR				
0131	Painter	Day	0.80	141.60	113.28
0115	Coolie	Day	0.80	135.25	108.20
9999	Putty, sand paper etc	L.S	8.06	1.00	8.06
9999	Sundries	L.S	11.96	1.00	11.96
9999	Wire brushes for cleaning	L.S	7.15	1.00	7.15
9999	Extra for delays	L.S	94.12	1.00	94.12
	TOTAL				581.14
	Add 1% for water charges				5.81
	TOTAL				586.95
	Add 15% for contractor's profit and overheads				88.04
	Cost of 30.00 mtrs				674.99
	Cost of 1.00 metre				22.50
	Say				22.50

13.56 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.

13.56.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for_30 mtrs				
	Area=22/7 x 106.40/1000 x 30 m = 10.032				
	MATERIALS				

Code	Description	Unit	Quantity	Rate	Amount
4202	Red oxide Zinc chromate primer	litre	0.54	58.00	31.32
9999	Carriage	L.S	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.24	141.60	33.98
0115	Coolie	Day	0.24	135.25	32.46
9999	Sundries	L.S	10.79	1.00	10.79
	MATERIALS				
0826	Aluminium paint	litre	0.80	89.00	71.20
9999	Carriage	L.S	1.43	1.00	1.43
9999	Putty, sand paper etc.	L.S	5.33	1.00	5.33
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Sundries	L.S	6.76	1.00	6.76
9999	Wire brushes for cleaning	L.S	11.96	1.00	11.96
9999	Extra for delays	L.S	66.43	1.00	66.43
	TOTAL				421.68
	Add 1% for water charges				4.22
	TOTAL				425.90
	Add 15% for contractor's profit and overheads				63.88
	Cost of 30.00 mtrs				489.78
	Cost of 1.00 metre				16.33
	Say				16.35

13.56 Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.

13.56.2 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Area=22/7 x157.2mm x30m =14.82sqm				
	MATERIALS				
4202	Red oxide Zinc chromate primer	litre	0.80	58.00	46.40
9999	Carriage	L.S	0.65	1.00	0.65
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Sundries	L.S	15.99	1.00	15.99
	MATERIALS				
0826	Aluminium paint	litre	1.19	89.00	105.91
9999	Carriage	L.S	2.08	1.00	2.08
9999	Putty, sand paper etc	L.S	7.93	1.00	7.93
	LABOUR				
0131	Painter	Day	0.80	141.60	113.28
0115	Coolie	Day	0.80	135.25	108.20
9999	Sundries	L.S	10.01	1.00	10.01
9999	Wire brushes for cleaning	L.S	17.81	1.00	17.81
9999	Extra for delays	L.S	101.40	1.00	101.40
	TOTAL				629.33
	Add 1% for water charges				6.29
	TOTAL				635.62
	15% for contractor's profit and overheads				95.34
	Cost of 30.00 mtrs				730.96
	Cost of 1.00 metre				24.37
	Say				24.35

13.57 Painting with oil type wood preservative of approved brand and manufacture:

13.57.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0859	Oil type wood preservative	litre	1.00	6.00	60.00
9999	Carriage of material	L.S	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.15	141.60	21.24
0115	Coolie	Day	0.15	135.25	20.29
9999	Brushes etc	L.S	4.16	1.00	4.16
9999	Sundries	L.S	3.90	1.00	3.90
	TOTAL				110.11
	Add 1 % for water charges				1.10
	TOTAL				111.21
	Add 15% for contractor's profit and overheads				16.68
	Cost of 10.00 sqm				127.89
	Cost of 1.00 sqm				12.79
	Say				12.80

13.58 Providing and applying two coats of fire retardant paint unthinned on cleaned wood/ ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
7240	Fire retardant paint	litre	5.70	318.00	1,812.60
9999	Carriage of material	L.S	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0114	Beldar	Day	0.54	135.25	73.04
9999	Putty, brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				1,978.35
	Add 1 % for water charges				19.78
	TOTAL				1,998.13
	Add 15% for contractor's profit and overheads				299.72
	Cost of 10.00 sqm				2,297.85
	Cost of 1.00 sqm				229.79
	Say				229.80

13.59 Coal tarring two coats on new work using 0.16 and 0.12 litre coal tar per sqm in the first coat and second coat respectively.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
9999	Lime	L.S	1.43	1.00	1.43
0324	Coal Tar	litre	2.80	16.00	44.80
9999	Carriage of material	L.S	1.43	1.00	1.43
0771	Kerosene oil	litre	0.50	19.00	9.50

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0114	Beldar	Day	0.43	135.25	58.16
9999	Brushes etc	Day	5.33	1.00	5.33
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				125.98
	Add 1% for water charges				1.26
	TOTAL				127.24
	Add 15% for contractor's profit and overheads				19.09
	Cost of 10.00 sqm				146.33
	Cost of 1.00 sqm				14.63
	Say				14.65

13.60 Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade

13.60.1 Two or more coats on new work-

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0835	Plastic emulsion paint	litre	1.21	140.00	169.40
9999	Materials for filling in holes and cracks (putty etc)	L.S	6.76	1.00	6.76
9999	Carriage of material	L.S	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	10.79	1.00	10.79
9999	Sundries	L.S	6.76	1.00	6.76
	TOTAL				344.64
	Add 1% for water charges				3.45
	TOTAL				348.09
	Add 15% for contractor's profit and overheads				52.21
	Cost of 10.00 sqm				400.30
	Cost of 1.00 sqm				40.03
	Say				40.05

13.61 Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:

13.61.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0833	Synthetic enamel paint	litre	1.16	115.00	133.40
9999	Materials for filling in holes and cracks (putty etc)	L.S	5.33	1.00	5.33
9999	Carriage	L.S	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	8.06	1.00	8.06

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				304.48
	Add 1% for water charges				3.04
	TOTAL				307.52
	Add 15% for contractor's profit and overheads				46.13
	Cost of 10.00 sqm				353.65
	Cost of 1.00 sqm				35.37
	Say				35.35

13.62 Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:

13.62.1 Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0823	Primer	litre	0.75	72.00	54.00
9999	Putty	L.S	2.73	1.00	2.73
9999	Carriage	L.S	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40
0115	Coolie	Day	0.25	135.25	33.81
9999	Brushes, sand paper etc	L.S	5.33	1.00	5.33
9999	Sundries	L.S	10.79	1.00	10.79
	MATERIALS				
0833	Enamel paint	litre	1.16	115.00	133.40
9999	Carriage of paint and material	L.S	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				441.60
	Add 1 % for water charges				4.42
	TOTAL				446.02
	Add 15% for contractor's profit and overheads				66.90
	Cost of 10.00 sqm				512.92
	Cost of 1.00 sqm				51.29
	Say				51.30

13.63 Painting with aluminium enamel paint of approved brand and manufacture to give an even shade:

13.63.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0826	Aluminium paint	litre	0.80	89.00	71.20
9999	Carriage of paint and material	L.S	1.43	1.00	1.43
9999	Putty etc	L.S	5.33	1.00	5.33
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	11.96	1.00	11.96
	TOTAL				246.18
	Add 1% for water charges				2.46
	TOTAL				248.64
	Add-15% for contractor's profit and overheads				37.30
	Cost of 10.00 sqm				285.94
	Cost of 1.00 sqm				28.59
	Say				28.60

13.64 Painting with acid proof paint of approved brand and manufacture to give an even shade:

13.64.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0827	Acid proof paint	litre	1.16	93.00	107.88
9999	Carriage of paint	L.S	1.43	1.00	1.43
9999	Putty etc	L.S	5.33	1.00	5.33
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				278.96
	Add 1 % for water charges				2.79
	TOTAL				281.75
	Add 15% for contractor's profit and overheads				42.26
	Cost of 10.00 sqm				324.01
	Cost of 1.00 sqm				32.40
	Say				32.40

13.65 Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:

13.65.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0828	Black anticorrosive bitumastic paint	litre	0.95	52.00	49.40
9999	Carriage	L.S	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.20	73.04
9999	Putty, brushes, sand paper etc	L.S	5.33	1.00	5.33
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				213.72
	Add 1 % for water charges				2.14
	TOTAL				215.86
	Add 15% for contractor's profit and overheads				32.38
	Cost of 10.00 sqm				248.24
	Cost of 1.00 sqm				24.82
	Say				24.80

13.66 Floor Painting with floor enamel paint of approved brand and manufacture to give an even shade:

13.66.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0831	Floor enamel paint in all shades	litre	1.48	100.00	148.00
9999	Carriage	L.S	1.43	1.00	1.43
9999	Putty etc	L.S	5.33	1.00	5.33
	LABOUR				
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				319.08
	Add 1 % for water charges				3.19
	TOTAL				322.27
	Add 15% for contractor's profit and overheads				48.34
	Cost of 10.00 sqm				370.61
	Cost of 1.00 sqm				37.06
	Say				37.05

13.67 Varnishing with varnish of approved brand and manufacture:

13.67.1 Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0856	Undercoat flatting varnish	litre	0.70	49.00	34.30
0763	Glue for sizing	kilogram	0.07	50.00	3.50
0857	Copal varnish	litre	1.16	100.00	116.00
9999	Carriage	L.S	1.43	1.00	1.43
9999	Putty for repair to holes etc	L.S	5.33	1.00	5.33
	LABOUR				
0131	Painter (0.36+0.54=0.90)	Day	0.90	141.60	127.44
0115	Coolie (0.36+0.54=0.90)	Day	0.90	135.25	121.72
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				423.63
	Add 1 % for water charges				4.24
	TOTAL				427.87
	Add 15% for contractor's profit and overheads				64.18
	Cost of 10.00 sqm				492.05
	Cost of 1.00 sqm				49.21
	Say				49.20

13.67 Varnishing with varnish of approved brand and manufacture:

13.67.2 Two or more coats glue sizing with spar varnish or an under coat of flatting varnish.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0856	Ordinary varnish	litre	0.70	49.00	34.30
0763	Glue	kilogram	0.07	50.00	3.50
0858	Superior spar varnish	litre	1.26	105.00	132.30
9999	Carriage	L.S	1.43	1.00	1.43
9999	Repair etc	L.S	2.73	1.00	2.73
	LABOUR				
0131	Painter (0.36+0.54=0.90)	Day	0.90	141.60	127.44
0115	Coolie (0.36+0.54=0.90)	Day	0.90	135.25	121.72
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				437.33
	Add 1% for water charges				4.37
	TOTAL				441.70
	Add 15% for contractor's profit and overheads				66.26
	Cost of 10.00 sqm				507.96
	Cost of 1.00 sqm				50.80
	Say				50.80

13.68 French spirit polishing:

13.68.1 Two or more coats on new works including a coat of wood filler.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
1000	Spirit	litre	1.63	37.00	60.31
9999	Pigment	kilogram	7.15	1.00	7.15
0999	Shellac	litre	0.24	192.00	46.08
9999	Carriage of material	L.S	2.73	1.00	2.73
9999	White woolen cloth, putty	L.S	16.12	1.00	16.12
9999	Sand paper cotton etc	L.S	13.39	1.00	13.39
9999	Lineseed oil	L.S	1.43	1.00	1.43
	LABOUR				
0131	Painter	Day	3.50	141.60	495.60
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				650.87
	Add 1% for water charges				6.51
	TOTAL				657.38
	Add 15% for contractor's profit and overheads				98.61
	Cost of 10.00 sqm				755.99
	Cost of 1.00 sqm				75.60
	Say				75.60

13.69 Polishing on wood work with ready made wax polish of approved brand and manufacture :

13.69.1 New work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm MATERIALS				

Code	Description	Unit	Quantity	Rate	Amount
0855	Ready made Wax polish	kilogram	0.50	150.00	75.00
9999	Carriage	L.S	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.80	141.60	113.28
0115	Coolie	Day	0.80	135.25	108.20
9999	Soap, brushes, cloth etc	L.S	4.16	1.00	4.16
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				308.18
	Add 1 % for water charges				3.08
	TOTAL				311.26
	Add15% for contractor's profit and overheads				46.69
	Cost of 10.00 sqm				357.95
	Cost of 1.00 sqm				35.80
	Say				35.80

13.70 Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0855	Wax polish	kilogram	0.10	150.00	15.00
	LABOUR				
0131	Painter	Day	0.40	141.60	56.64
0115	Coolie	Day	0.40	135.25	54.10
9999	Acetic acid soap, cloth etc	L.S	5.33	1.00	5.33
9999	Sundries including Carriage	L.S	8.06	1.00	8.06
	TOTAL				139.13
	Add 1% for water charges				1.39
	TOTAL				140.52
	Add 15% for contractor's profit and overheads				21.08
	Cost of 10.00 sqm				161.60
	Cost of 1.00 sqm				16.16
	Say				16.15

13.71 Lettering with black Japan paint of approved brand and manufacture

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 100 letters of 15 cm height				
	MATERIALS				
0829	Paint	litre	0.56	65.00	36.40
9999	Carriage	L.S	0.91	1.00	0.91
	LABOUR				
0131	Painter	Day	6.00	141.60	849.60
0115	Coolie	Day	2.00	135.25	270.50
9999	Painting brushes, turpentine, stencil etc	L.S	13.39	1.00	13.39
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				1.178.86
	Add 1 % for water charges				11.79
	TOTAL				1.190.65
	Add15% for contractor's profit and overheads				178.60
	Cost of 100 letters of 15 cm height				1.369.25
	Cost of 1 letters of 1 cm height				0.91
	Say				0.90

13.72 Washed stone grit plaster on exterior walls of height upto 10 M. above ground level in two layers, under layer 12mm cement plaster 1:4 (1 cement : 4 coarse sand) furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15mm cement plaster 1:1/2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10mm nominal size) in panels with groove all around as per approved pattern including scrubbing and washing, the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in- charge (Payment for providing grooves shall be made separately).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
3.9	Under layer 12 mm cement plaster with Cement mortar 1:4(1 cement: 4 coarse sand).	cum	0.144	2,578.45	371.30
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0114	Beldar	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding	L.S.	8.97	1.00	8.97
	Applying cement slurry				
0367	Cement	tonne	0.02	4,500.00	90.00
2209	Carriage	tonne	0.02	47.29	0.95
0114	Beldar	Day	0.25	135.25	33.81
	Top layer 15 mm thick stone chipping plaster Quantity required = 0.172 cum including wastage				
	Preparation of cement concrete mix 1:1/2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size)				
2911	Stone chippings 10 mm nominal size	cum	0.14	700.00	98.00
2202	Carriage of Stone chipping 10 mm nominal size	cum	0.14	53.21	7.45
0982	Coarse sand	cum	0.04	600.00	24.00
2203	Carriage of Coarse sand	cum	0.04	53.21	2.13
0367	Cement	tonne	0.10	4,500.00	450.00
2209	Carriage of Cement	tonne	0.10	47.29	4.73
0114	Beldar	Day	0.10	135.25	13.52
0101	Bhisti	Day	0.05	138.45	6.92
9999	Hire and running charges of mechanical mixer	L.S.	4.29	1.00	4.29
9999	Sundries	L.S.	2.08	1.00	2.08
	LABOUR				
0123	Mason 1 st class	Day	1.75	151.50	265.12
0114	Beldar	Day	1.75	135.25	236.69
0101	Bhisti	Day	0.30	138.45	41.54
9999	Scaffolding	L.S.	24.44	1.00	24.44
	Labour for washing				
0123	Mason 1st class	Day	1.00	151.50	151.50
0115	Coolie	Day	0.50	135.25	67.62
9999	Sundries soft brushes etc	L.S.	25.22	1.00	25.22
	TOTAL				2,257.28
	Add 1 % for water charges				22.52
	TOTAL				2,279.85
	Add 15% for contractor's profit and overheads				341.98
	Cost of 10.00 sqm				2,621.83
	Cost of 1.00 sqm				262.18
	Say				262.20

13.73 Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :

13.73.1 15 mm wide and 15 mm deep groove

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Second class kail wood in plank 30 x0.015 x0.015m=6.75cudmv-				
	Wastage@ 10%= 0.68				
	Total = 7.43 cudm				
	Assuming that the battens shall become unserviceable after using 5 times				
	Cost for using once				
	MATERIALS				
1198	Second class kail wood in planks	10 cudm	1.48	178.00	26.34
9999	Carriage of wood	L.S.	0.39	1.00	0.39
	Labour for making battens				
0112	Carpenter 2nd class	Day	0.15	141.60	21.24
0114	Beldar	Day	0.15	135.25	20.29
9999	Sundries	Day	2.86	1.00	2.86
	Labour for nailing the battens to under layer and finishing and repairing grooves				
0123	Mason 1st class	Day	0.70	151.50	106.05
0114	Beldar	Day	0.70	135.25	94.68
9999	Nails and cement mortar	L.S.	71.76	1.00	71.76
	TOTAL				343.61
	Add 1% for water charges				3.44
	TOTAL				347.05
	Add 15% for contractor's profit and overheads				52.06
	Cost of 30.00 mtrs				399.11
	Cost of 1.00 metre				13.30
	Say				13.30

13.73 Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :

13.73.2 20 mm wide and 15 mm deep groove

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Second class kail wood in plank 30 x0.02 x0.015m =9.00 cudm				
	Wastage® 10%= 0.90				
	Total = 9.90 cudm				
	Assuming that the battens shall become unserviceable after using 5 times				
	Cost for using once				
	MATERIALS				
1198	Second class kail wood in planks	10 cudm	1.98	178.00	35.24
9999	Carriage of wood	L.S.	0.52	1.00	0.52
	Labour for making battens				

Code	Description	Unit	Quantity	Rate	Amount
0112	Carpenter 2nd class	Day	0.15	141.60	21.24
0114	Beldar	Day	0.15	135.25	20.29
9999	Sundries	Day	2.86	1.00	2.86
	Labour for nailing the battens to under layer and finishing and repairing grooves				
O123	Mason 1st class	Day	0.70	151.50	106.05
0114	Beldar	Day	0.70	135.25	94.68
9999	Nails and cement mortar	L.S.	71.76	1.00	71.76
	TOTAL				352.64
	Add 1% for water charges				3.53
	TOTAL				356.17
	Add 15% for contractor's profit and overheads				53.43
	Cost of 30.00 mtrs				409.60
	Cost of 1.00 metre				13.65
	Say				13.65

13.74 Extra for washed grit plaster on exterior walls of height more than 10m from ground level for every additional height of 3 m or part thereof.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
9999	Scaffolding	L.S.	215.28	1.00	215.28
0123	Mason 1st class	Day	0.30	151.50	45.45
0114	Beldar	Day	0.30	135.25	40.57
0101	Bhisti	Day	0.15	138.45	20.77
9999	Sundries	L.S	28.60	1.00	28.60
	TOTAL				350.67
	Add 1 % for water charges				3.51
	TOTAL				354.18
	Add-15% for contractor's profit and overheads				53.13
	Cost of 10.00 sqm				407.31
	Cost of 1.00 sqm				40.73
	Say				40.75

13.75 Extra for washed stone grit plaster on circular work not exceeding 6m in radius (in two coats).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S	53.82	1.00	53.82
	TOTAL				197.19
	Add 1 % for water charges				1.97
	TOTAL				199.16
	Add 15% for contractor's profit and overheads				29.87
	Cost of 10.00 sqm				229.03
	Cost of 1.00 sqm				22.90
	Say				22.90

13.76 Forming groove of uniform size from 12xl2mm and upto 25xl5mm in plastered surface as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repairs to the edges of plaster panel and finishing the groove complete as per specifications and direction of the Engineer-in-Charge..

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Second class kail wood in plank {30 xO.025 x0.015m =0.01 lcum} + {30 x0.012 x0.012m =0.004cum} =0.015cum =15.00cudm				
	Wastage @ 10% = 0.15 cudm				
	Total = =15.15cudm				
	Average =15.15/2 =7.57				
	Assuming that the battens shall become unserviceable after using 5 times = 7.57				
	Cost for using once = 1.50 cudm				
1198	Second class kail wood in planks	10 cum	1.50	178.00	26.34
9999	Carriage of timber	L.S.	0.39	1.00	0.39
	Labour for making battens				
0112	Carpenter 2nd class	Day	0.15	141.60	21.24
0114	Beldar	Day	0.15	135.25	20.29
9999	Sundries	Day	2.86	1.00	2.86
	Labour for nailing the battens to under layer and finishing and repairing grooves				
0123	Mason 1st class	Day	0.70	151.50	106.05
0114	Beldar	Day	0.70	135.25	94.68
9999	Nails and cement mortar	L.S.	71.86	1.00	71.76
	TOTAL				343.97
	Add 1% for water charges				3.44
	TOTAL				347.41
	Add 15% for contractor's profit and overheads				52.11
	Cost of 30.00 mtrs				399.52
	Cost of 1.00 metre				13.32
	Say				13.30

13.77 Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit, plaster.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0368	(A) Add for White Cement	tonne	0.10	9,700.00	970.00
0367	(B) Duduct for Ordinary Cement	tonne	0.10	4,500.00	(-)450.00
	TOTAL = A - B				520.00
	Add 1 % for water charges				5.20
	TOTAL				525.20
	Add 15% for contractor's profit and overheads				78.78
	Cost of 10.00 sqm				603.98
	Cost of 1.00 sqm				60.40
	Say				60.40

13.78 Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0868	Premixed super white gypsum plaster @ 16.14kg /sqm = 161.40 + 5% wastage = 161.40+8.07= 169.47 kg.	kg	169.47	5.20	881.24
	LABOUR				
0155	Mason	Day	1.20	146.55	175.86
0115	Coolie	Day	1.20	135.25	162.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				1232.01
	Add 1 % for water charges				12.32
	TOTAL				1244.33
	Add 15% for contractor's profit and overheads				186.65
	Cost of 10.00 sqm				1430.98
	Cost of 1.00 sqm				143.10
	Say				143.10

13.79 Extra for addition of synthetic polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster /mortar by using 125 gms. of synthetic polyester triangular fibre for 50 kg. cement used in cement mortar as per directions of Engineer-in-Charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for per bag of 50 kgs. of cement used in mortar				
	Material				
8733	Synthetic Polyester Triangular fibre of length 6 mm including labour for mixing	kg	0.125	336.00	42.00
	Add 1% for water charge				00.42
	Total				42.42
	Add for contractor's profit and overheads 15%				6.36
	Cost per bag of cement				48.78
	Say				48.80

SUB HEAD : 14.0

REPAIRS TO BUILDING

14.1 Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. metres and under including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete including disposal of rubbish to the dumping ground within 50 metres lead :

14.1.1 With cement mortar 1:4 (1 cement: 4 fine sand)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 fine sand).	cum	0.183	2,278.85	417.03
	(Rate as per item No 3.4)				
0155	Mason	Day	1.21	146.55	177.3
0115	Coolie	Day	1.29	135.25	174.47
0114	Beldar	Day	0.54	135.25	73.04
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S.	15.21	1.00	15.21
	TOTAL				984.45
	Add 1% for water charges				9.84
	TOTAL				994.29
	Add 15% for contractor's profit and overheads				149.14
	Cost of 10.00 sqm				1,143.43
	Cost of 1.00 sqm				114.34
	Say				114.35

14.1 Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. metres and under including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete including disposal of rubbish to the dumping ground within 50metres lead :

14.1.2 With cement mortar 1:4(1 cement: 4 coarse sand).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00sqm				
	MATERIALS				
	Cement mortar 1:4 (1 cement: 4 coarse sand).				
	(Rate as per item No 3.9)	cum	0.183	2578.45	471.86
	LABOUR				
0155	Mason	Day	1.21	146.55	177.33
0115	Coolie	Day	1.29	135.25	174.47
0114	Beldar	Day	0.54	135.25	73.04
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S.	15.21	1.00	15.21
	TOTAL				1,039.28
	Add 1 % for water charges				10.39
	TOTAL				1,049.67
	Add 15% for contractor's profit and overheads				157.45
	Cost of 10.00 sqm				1,207.12
	Cost of 1.00 sqm				120.71
	Say				120.70

14.2 Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding hold fasts in cement concrete blocks with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete including disposal of rubbish to the dumping ground within 50 metres lead :

14.2.1 Door chowkhats

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 No.				
0295	20 mm nominal size stone Aggregate	cum	0.021	700.00	14.70
0297	10 mm nominal size stone Aggregate	cum	0.0072	700.00	5.04
2202	Carriage of Stone aggregate	cum	0.0282	53.21	1.50
0982	Coarse sand	cum	0.0141	600.00	8.46
2203	Carriage of Coarse sand	cum	0.0141	53.21	0.75
0367	Cement	tonne	0.0066	4,500.00	29.70
2209	Carriage of Cement	tonne	0.0066	47.29	0.31
0114	Beldar	Day	0.027	135.25	3.65
0115	Coolie	Day	0.0195	135.25	2.64
0130	Mistry	Day	0.0084	151.50	1.27
0123	Mason (brick layer) 1 st class	Day	0.0018	151.50	0.27
0124	Mason 2nd class	Day	0.0018	141.60	0.25
0128	Mate	Day	0.0012	138.45	0.17
9999	Scaffolding	L.S.	1.43	1.00	1.43
9999	Hire and running charges of mechanical mixer	L.S.	0.78	1.00	0.78
9999	Sundries	L.S.	0.39	1.00	0.39
	Cement mortar 1:6 (1 cement: 6 fine sand) (Rate as per item no. 3.6)	cum	0.01	1687.70	16.88
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.18	1.00	24.18
9999	Painting two coats of coaltar	L.S.	13.52	1.00	13.52
9999	Disposal of mulba	L.S.	1.82	1.00	1.82
0155	Mason (average)	Day	0.50	146.55	73.28
0114	Beldar	Day	0.75	135.25	101.44
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				305.16
	Add 1% for water charges				3.05
	TOTAL				308.21
	Add 15% for contractor's profit and overheads				46.23
	Cost of 1.00 chowkhat				354.44
	Say				354.45

14.2 Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding hold fasts in cement concrete blocks with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete including disposal of rubbish to the dumping ground within 50 metres lead :

14.2.2 Window chowkhats

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 No				
0295	20 mm nominal size stone Aggregate	cum	0.014	700.00	9.80
0297	10 mm nominal size stone Aggregate	cum	0.0048	700.00	3.36
2202	Carriage of Stone aggregate	cum	0.0188	53.21	1.00
0982	Coarse sand	cum	0.0094	600.00	5.64
2203	Carriage of Coarse sand	cum	0.0094	53.21	0.50
0367	Cement	tonne	0.0044	4500.00	19.80
2209	Carriage of Cement	tonne	0.0044	47.29	0.21
0114	Beldar	Day	0.018	135.25	2.43

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.013	135.25	1.76
0130	Mistry	Day	0.0056	151.50	0.85
0123	Mason 1 st class	Day	0.0012	151.50	0.18
0124	Mason 2nd class	Day	0.0012	141.60	0.17
0128	Mate	Day	0.0008	138.45	0.11
9999	Scaffolding and sundries	L.S.	0.91	1.00	0.91
9999	Hire and running charges of mechanical mixer	L.S.	0.52	1.00	0.52
9999	Sundries	L.S.	0.26	1.00	0.26
	Cement mortar 1.6 (1 cement: 6 fine sand) Rate as per item No. 3.6	cum	0.006	1687.70	10.13
9999	Cement concrete 1:2:4	L.S.	9.88	1.00	9.88
9999	Painting two coats of coaltar	L.S.	0.91	1.00	0.91
0155	Mason	Day	0.33	146.55	48.36
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				184.40
	Add 1% for water charges				1.84
	TOTAL				186.24
	Add 15% for contractor's profit and overheads				27.94
	Cost of 1.00 chowkhat				214.18
	Say				214.20

14.2 Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding hold fasts in cement concrete blocks with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete including disposal of rubbish to the dumping ground within 50 metres lead :

14.2.3 Clerestory window chowkhats

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1.00 N0.				
0295	20 mm nominal size stone Aggregate	cum	0.007	700.00	4.90
0297	10 mm nominal size stone Aggregate	cum	0.0024	700.00	1.68
2202	Carriage of Stone aggregate	cum	0.0094	53.21	0.50
0982	Coarse sand	cum	0.0047	600.00	2.82
2203	Carriage of Coarse sand	cum	0.0047	53.21	0.25
0367	Cement	tonne	0.0022	4,500.00	9.90
2209	Carriage of Cement	tonne	0.0022	47.29	0.10
0114	Beldar	Day	0.009	135.25	1.22
0115	Coolie	Day	0.0065	135.00	0.88
0130	Mistry	Day	0.0028	151.50	0.42
0123	Mason 1 st class	Day	0.0006	151.50	0.09
0124	Mason 2nd class	Day	0.0006	141.60	0.08
0128	Mate	Day	0.0004	138.45	0.06
9999	Scaffolding and sundries	L.S.	0.52	1.00	0.52
9999	Hire and running charges of mechanical mixer	L.S.	0.26	1.00	0.26
9999	Sundries	L.S.	0.13	1.00	0.13
	Cement mortar 1:6 (1 cement: 6 fine sand). (Rate as per item No. 3.6)	cum	0.003	1,687.70	5.06
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	8.06	1.00	8.06
9999	Painting two coats of coaltar	L.S.	0.91	1.00	0.91
0155	Mason (average)	Day	0.17	146.55	24.91
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				133.10
	Add 1 % for water charges				1.33
	TOTAL				134.43
	Add 15% for contractor's profit and overheads				20.16
	Cost of 1.00 chowkhat				154.59
	Say				154.60

14.3 Fixing chowkhat in existing opening in brick / RCC wall with dash fasteners/chemical fastners of appropriate size (3nos on each vertical member of door chowkhat and 2 nos. on each vertical member and 1 no. on each horizontal member of window chowkhat) including Cost of dash fasteners/ chemical fasteners.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 chowkhat				
0114	Beldar	Day	0.027	135.25	3.65
0115	Coolie	Day	0.0195	135.25	2.64
0130	Mistry	Day	0.0084	151.50	1.27
0128	Mate	Day	0.0012	138.45	0.17
9,999	Disposal of mulba	L.S.	1.82	1.00	1.82
7,019	Dash fastner/ chemical fastner	each	6.00	8.00	48.00
9,999	Hire charges of drill machine, scaffolding and sundries.	L.S.	12.22	1.00	12.22
	TOTAL				69.77
	Add 1 % for water charges				0.70
	TOTAL				70.47
	Add 15% for contractor's profit and overheads				10.57
	Cost of 1.00 chowkhat				81.04
	Say				81.05

14.4 Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs complete to match existing surface i/c disposal of mulba/ rubbish to the nearest dumping ground.

14.4.1 For door/ window/ clerestory window.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 opening of size 0.90 X 2.10=1.89 sqm.				
	Cement mortar 1:6 (1 cement: 6 fine sand). Rate as per item no. 3.6	cum	0.01	1,687.70	16.88
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.57	1.00	24.57
0124	Mason 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	1.20	135.25	162.30
0115	Coolie	Day	0.40	135.25	54.10
9999	Scaffolding and Sundries	L.S.	3.50	1.00	3.50
	TOTAL				332.15
	Add 1% for water charges				3.32
	TOTAL				335.47
	Add 15% for contractor's profit and overheads				50.32
	Cost of 1.89sqm.				385.79
	Cost of 1.00 sqm.				204.12
	Say				204.10

14.5 Renewing glass panes, with putty and nails wherever necessary:

14.5.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 Sqm.				
	MATERIALS				
2406	Glass panes - 1.00 sqm + 10% wastage= 1.10 Sqm	sqm	1.10	248.00	272.80
9999	Carriage including sundries	L.S.	1.82	1.00	1.82
0863	Putty for wood work	kilogram	0.68	24.00	16.32
9999	Painting or varnishing or beewaxing	L.S.	5.33	1.00	5.33
9999	Sundries Nails etc.	L.S.	6.76	1.00	6.76

Code	Description	Unit	Quantity	Rate	Amount
0119	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.23	135.25	31.11
9999	Sundries such as Rag, cotton etc	L.S.	1.43	1.00	1.43
	TOTAL				368.14
	Add 1% for water charges				3.68
	TOTAL				371.82
	Add 15% for'contractor's profit and overheads				55.77
	Cost of 1.00 sqm				427.59
	Say				427.60

14.5 Renewing glass panes, with putty and nails wherever necessary:

14.5.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 sqm.				
	MATERIALS				
2407	Glass panes - 1.00 Sqm+10% wastage= 1.10 sqm.	sqm	1.10	340.00	374.00
9999	Carriage including sundries	L.S.	1.82	1.00	1.82
0863	Putty for wood work	Kilogram	0.68	24.00	16.32
9999	Painting or varnishing or beewaxing	L.S.	5.33	1.00	5.33
9999	Sundries Nails etc.	L.S.	6.76	1.00	6.76
0119	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.23	135.25	31.11
9999	Sundries such as Rag, cotton etc	L.S.	1.43	1.00	1.43
	TOTAL				469.34
	Add 1% for water charges				4.69
	TOTAL				474.03
	Add 15% for contractor's profit and overheads				71.10
	Cost of 1.00 sqm				545.13
	Say				545.15

14.6 Renewing glass panes, with wooden fillets wherever necessary:

14.6.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 sqm.				
	MATERIALS				
2406	Glass panes =1 sqm + 0.1 sqm (wastage @ 10%)=1.10 sqm.	sqm	1.10	248.00	272.80
	Wooden fillets -				
1189	Second class teak wood in scantling	10 cudm	0.25	394.00	9.85
1194	Second class deodar wood in planks	10 cudm	0.25	335.00	8.38
1196	First class kail wood in planks	10 cudm	0.25	186.00	4.65
9999	Painting or varnishing or beewaxing	L.S.	4.42	1.00	4.42
9999	Sundries Nails etc.	L.S.	2.73	1.00	2.73
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0119	Glazier	Day	0.25	141.60	35.40
0114	Beldar	Day	0.45	135.25	60.86
9999	Sundries such as Rag, cotton etc	L.S.	1.82	1.00	1.82
	TOTAL				429.23
	Add 1% for water charges				4.29
	TOTAL				433.52
	Add 15% for contractor's profit and overheads				65.03
	Cost of 1.00 sqm				498.55
	Say				498.55

14.6 Renewing glass panes, with wooden fillets wherever necessary:
14.6.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 sqm.				
	MATERIALS				
2407	Glass panes =1 sqm + 0.10 sqm (wastage @ 10%)= 1.10 sqm	sqm	1.10	340.00	374.00
	Wooden fillets -				
1189	Second class teak wood in scantling	10 cudm	0.25	394.00	9.85
1194	Second class deodar wood in planks	10 cudm	0.25	335.00	8.38
1196	First class kail wood in planks	10 cudm	0.25	186.00	4.65
9999	Painting or varnishing or beewaxing	L.S.	4.42	1.00	4.42
9999	Sundries Nails etc.	L.S.	2.73	1.00	2.73
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0119	Glazier	Day	0.25	141.60	35.40
0114	Beldar	Day	0.45	135.25	60.86
9999	Sundries such as Rag, cotton etc	L.S.	1.82	1.00	1.82
	TOTAL				530.43
	Add 1 % for water charges				5.30
	TOTAL				535.73
	Add 15% for contractor's profit and overheads				80.36
	Cost of 1.00 sqm				616.09
	Say				616.10

14.7 Renewing glass panes and refixing existing wooden fillets:
14.7.1 Float glass panes of thickness 4 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 sqm.				
	MATERIALS				
	Glass panes = 1.00 sqm				
	Add Wastage @ 10% = 0.l0sqm				
2406	Total = 1.10 sqm	sqm	1.10	248.00	272.80
9999	Carriage of glasspanes and other materials	L.S.	2.73	1.00	2.73
9999	Sundries Nails etc.	L.S.	9.88	1.00	9.88
9999	Methylated spirit	L.S.	5.33	1.00	5.33
0119	Glazier	Day	0.30	141.60	42.48
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S.	1.43	1.00	1.43
	TOTAL				375.22
	Add 1% for water charges				3.75
	TOTAL				378.97
	Add 15% for contractor's profit and overheads				56.85
	Cost of 1.00 sqm				435.82
	Say				435.80

14.7 Renewing glass panes and refixing existing wooden fillets:
14.7.2 Float glass panes of thickness 5.5 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 sqm.				
	MATERIALS				
	Glass panes = 1.00 sqm				
	Add Wastage @ 10% = 0.1 sqm				
2407	Total = 1.10 sqm	sqm	1.10	340.00	374.00
9999	Carriage of glasspanes and other materials	L.S.	2.73	1.00	2.73
9999	Sundries Nails etc.	L.S.	9.88	1.00	9.88
9999	Methylated spirit	L.S.	5.33	1.00	5.33
0119	Glazier	Day	0.30	141.60	42.48
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S.	1.43	1.00	1.43
	TOTAL				476.42
	Add 1% for water charges				4.76
	TOTAL				481.18
	Add 15% for contractor's profit and overheads				72.18
	Cost of 1.00 sqm				553.36
	Say				553.35

14.8 Supplying and fixing new wooden fillets wherever necessary:
14.8.1 2nd class teak wood fillets

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 metres length				
	MATERIALS				
	2nd class teak wood in planks				
	10.00x0.01x0.01 = 1.00 cudm				
	Add 15% wastage = 0.15 cudm				
1190	Total = 1.15 cudm	10 cudm	1.15	410.00	47.15
9999	Nails	L.S.	26.91	1.00	26.91
	LABOUR				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S.	2.73	1.00	2 73
	TOTAL				146.00
	Add 1% for water charges				1.46
	TOTAL				147.46
	Add 15% for contractor's profit and overheads				22.12
	Cost of 10.00 metre				169.58
	Cost of 1.00 metre				16.96
	Say				16.95

14.8 Supplying and fixing new wooden fillets wherever necessary:
14.8.2 Hollock wood fillets.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres length				
	MATERIALS				
	Hollock wood in scantling				
	10.00x0.01x0.01 = 1.00 cudm				
	Add 15% wastage =0.15 cudm				

Code	Description	Unit	Quantity	Rate	Amount
2466	Total = 1.15 cudm	10 cudm	1.15	217.00	24.96
9999	Nails	L.S.	26.91	1.00	26.91
	LABOUR				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				123.81
	Add 1% for water charges				1.24
	TOTAL				125.05
	Add 15% for contractor's profit and overheads				18.76
	Cost of 10.00 metre				143.81
	Cost of 1.00 metre				14.38
	Say				14.40

14.9 Renewal of old putty of glass panes (length)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 13.00 metres length				
	MATERIALS				
0863	Cost of putty	kilogram	0.68	24.00	16.32
9999	Nails	L.S.	7.15	1.00	7.15
9999	Spirit	L.S.	2.73	1.00	2.73
	LABOUR				
0112	Carpenter 2nd class	Day	0.30	141.60	42.48
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S.	1.43	1.00	1.43
	TOTAL				110.68
	Add 1% for water charges				1.11
	TOTAL				111.79
	Add 15% for contractor's profit and overheads				16.77
	Cost of 13.00 metres				128.56
	Cost of 1.00 metre				9.89
	Say				9.90

14.10 Refixing old glass panes with putty and nails

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 glasses area each 0.10 sqm.				
0863	Cost of putty	kilogram	0.68	24.00	16.32
9999	Spirit	L.S.	2.73	1.00	2.73
9999	Nails	L.S.	7.15	1.00	7.15
	LABOUR				
0119	Glazier	Day	0.30	141.60	42.48
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S.	1.43	1.00	1.43
	TOTAL				110.68
	Add 1% for water charges				1.11
	TOTAL				111.79
	Add 15% for contractor's profit and overheads				16.77
	Cost of 1.00 sqm				128.56
	Say				128.55

14.11 Fixing old glass panes with wooden fillets (excluding cost of fillets)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 sqm				
	LABOUR				
0119	Glazier	Day	0.30	141.60	42.48
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S.	1.43	1.00	1.43
9999	Nails	L.S.	3.90	1.00	3.90
	TOTAL				88.38
	Add 1% for water charges				0.88
	TOTAL				89.26
	Add 15% for contractor's profit and overheads				13.39
	Cost of 1.00 sqm				102.65
	Say				102.65

14.12 Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab including cutting chase and making good and painting exposed portion of the clamps complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for each fan clamp.				
	MATERIALS				
1003	M.S.bar 16mm dia = 40cm (including wastage) @ 1.58 Kg/m = 0.632 Kg	qtl	0.00632	3050.00	19.28
9999	Cement concrete 1:2:4 (1 Cement: 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) mortar for rendering or plastering	L.S.	13.52	1.00	13.52
9999	Painting two or more coats to exposed portion of the clamp including priming coat	L.S.	7.15	1.00	7.15
	Labour for fixing				
0102	Blacksmith 1st class	Day	0.03	151.50	4.54
0124	Mason 2nd class	Day	0.12	141.60	16.99
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				98.02
	Add 1% for water charges				0.98
	TOTAL				99.00
	Add 15% for contractor's profit and overheads				14.85
	Cost of 1 each				113.85
	Say				113.85

14.13 Regrading terracing of mud phaska covered with tiles or brick, in cement by dismantling tiles or bricks, removing mud plaster preparing the surface of mud phaska to proper slope relaying mud plaster gobri leaping and tiles or bricks, grouted in cement mortar 1:3 (1 cement : 3 fine sand) including replacing unserviceable tiles or bricks with new ones and disposal of unserviceable material to the dumping ground (the cost of the new tiles or brick excluded) within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	(i) Dismantling tiles/bricks in cement mortar including removing mud plaster and cleaning the tiles/bricks				
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0155	Mason (average)	Day	0.54	146.55	79.14
0114	Beldar	Day	0.54	135.25	73.04
	(ii) Preparing the surface, for mud phuska to proper slope, relaying mud plaster gobri leeping.				
0155	Mason (average))	Day	0.27	146.55	39.57
	25mm thick mud plaster including gobri leaping				
	MATERIALS				
	Mud mortar (Rate as per item No 3.18)	cum	0.24	156.85	37.64
0308	Bhusa	quintal	0.084	200.00	16.80
	Gobri mortar (Rate as per item No 3.18)	cum	0.12	156.85	18.82
	LABOUR				
0114	Beldar	Day	0.25	135.25	33.81
	(iii) relaying tiles/bricks including Cement mortar 1:3 (1 Cement: 3 fine sand) for grouting (Rate as per item No. 3.3	cum	0.061	2870.00	175.07
	LABOUR				
0155	Mason	Day	1.20	146.55	175.86
0114	Beldar	Day	1.50	135.25	202.88
0101	Bhisti	Day	1.00	138.45	138.45
9999	Disposal of mulba	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				999.14
	Add 1 % for water charges				9.99
	TOTAL				1,009.13
	Add 15% for contractor's profit and overheads				151.37
	Cost of 10.00 sqm				1,160.50
	Cost of 1.00 sqm				116.05
	Say				116.05

14.14 Replacing sand stone slabs in roofing laid in cement mortar 1:4 (1 cement: 4 coarse sand) including necessary repairs and cement pointing with same mortar complete including disposal of rubbish to dumping ground within 50 metres of lead:

14.14.1 Red/ white sand stone slabs 30 to 50 mm thick.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	Dismantling existing stone, slabs roofing 1x10.00 sqmx0.05m = 0.50 cum.				
0114	Beldar	Day	0.885	135.25	119.70
0115	Coolie	Day	0.375	135.25	50.72
9999	Sundries	L.S.	4.03	1.00	4.03
9999	Cleaning the surface including necessary repairs	L.S.	40.43	1.00	40.43
1174	Red sand stone slab 45 mm and 50 mm thick (un-dressed)	sqm	11.00	145.00	1,595.00
2216	Carriage of Stone slabs	tonne	1.41	47.29	66.68
	Cement mortar, 1:4(1 cement: 4 coarse sand). (Rate as per item No. 3.9 of SH - Mortar)	cum	0.0105	2,578.45	27.07
	Cement mortar 1:3 (1 cement :3 fine sand). (Rate as per item 3.3 of SH- Mortar)	cum	0.0075	2,870.00	21.52
0155	Mason	Day	1.69	146.55	247.67
0100	Bandhani	Day	2.03	138.45	281.05

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	1.69	135.25	228.57
0101	Bhisti	Day	0.34	138.45	47.07
9999	Sundries	L.S.	16.12	1.00	16.12
2264	Carriage of Rubbish	cum	0.50	53.21	26.60
	TOTAL				2,772.23
	Add 1% for water charges				27.72
	TOTAL				2,799.95
	Add 15% for contractor's profit and overheads				419.99
	Cost of 10.00 sqm				3,219.94
	Cost of 1.00 sqm				321.99
	Say				322.00

14.15 Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead:

14.15.1 Sal wood battens.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 battens i.e. 300 cudm 3 metres long of 100x100mm 10x3x0.1x0.1 = 0.3cum =300cudm Add wastage @ 2%= 6 cudm, Total = 306.00 cudm				
	MATERIALS				
1199	Sal wood battens	10 cudm	306.00	218.00	6,670.80
2204	Carriage of battens	cum	0.306	60.81	18.61
	LABOUR				
	Taking out the existing battens and refixing new one including supporting the roof				
0112	Carpenter 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	2.00	135.25	270.50
9999	Disposal of mulba	L.S.	5.33	1.00	5.33
9999	Making good the holes including sundries	L.S.	80.73	1.00	80.73
0859	Oil type wood preservative	litre	1.22	60.00	73.20
0131	Painter	Day	0.183	141.60	25.91
0115	Coolie	Day	0.183	135.25	24.75
9999	Carriage	L.S.	0.78	1.00	0.78
9999	Brushes	L.S.	5.07	1.00	5.07
9999	Sundries	L.S.	4.81	1.00	4.81
	TOTAL				7,251.29
	Add 1% for water charges				72.51
	TOTAL				7,323.80
	Add 15% for contractor's profit and overheads				1,098.57
	Cost of 300 Cudm				8,422.37
	Cost of 1.00 cum				28,074.57
	Say				28,074.55

14.16 Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :

14.16.1 Not exceeding 4.00 metres in length.

14.16.1.1 Sal wood beams

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one beam i.e. 300 cudm.				
	0.25 x 0.30m x 4.0m (long) = 0.30 cum				
	Add wastage @ 2% (0.006 cum) = 0.306 cum = 306 cudm				
	Propping the roof				
	MATERIALS				
	100mm diameter ballies 4m long 10 nos.				
	100x100mm salwood battens 1.0 metre long 5 nos.x 1.0x0.1 x0.1 =0.05cum = 50 cudm.				
	These materials can be used for 16 times				
	Hence qty for one operation 1/16 = 3.125 cudm				
1199	Sal wood beams	10 cudm	3.125	218.00	68.12
2204	Carriage of Timber	cum	0.0228	60.81	1.39
	LABOUR				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
	(ii) Taking out the existing beams etc.				
	LABOUR				
0155	Mason (Avarage)	Day	0.13	146.55	19.05
0100	Bandhani	Day	0.50	138.45	69.22
0114	Beldar	Day	0.33	135.25	44.63
	(iii) Renewal				
	(a) Materials and Labour				
1199	Sal wood beam wrought	10 cudm	306.00	218.00	6,670.80
2204	Carriage of beams	cum	0.306	60.81	18.61
0112	Carpenter 2nd class	Day	1.00	141.60	141.60
0100	Bandhani	Day	0.50	138.45	69.22
0114	Beldar	Day	1.00	135.25	135.25
	Painting with oil preservative				
	(4x1.1) +(2.0x0.25x0.30) =4.4 + 0.15 = 4.55-sqm				
0859	Oil type wood preservative	litre	0.455	60.00	27.30
0131	Painter	Day	0.07	141.60	9.91
0115	Coolie	Day	0.07	135.25	9.47
9999	Sundries	L.S.	0.13	1.00	0.13
9999	Carriage	L.S.	1.82	1.00	1.82
9999	Brushes	L.S.	1.82	1.00	1.82
9999	Making good the holes	L.S.	20.67	1.00	20.67
9999	Sundries	L.S.	26.91	1.00	26.91
0302	SafedaBalli 125mmdia	mtr	2.50	29.00	72.50
	TOTAL				7,477.63
	Add 1% for water charges				74.78
	TOTAL				7,552.41
	Add 15% for contractor’s profit and overheads				1,132.86
	Cost of 300 Cudm				8,685.27
	Cost of 1.00 cum				28,950.90
	Say				28,950.90

14.16 Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :

14.16.1 Not exceeding 4.00 metres in length.

14.16.1.2 Hollock wood beams

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one beam i.e. 300 cudm.				
	0.25 x 0.30m x 4.0m (long) = 0.30 cum				
	Add wastage @ 2% (0.006 cum) = 0.306 cum				
	=306cudm				
	(I) Propping the roof				
	MATERIALS				
	100mm diameter bailies 4m long 10 nos.				
	100x100mm Hallock wood Ballens 1.0 metre long 5				
	nos.x 1.0x0.1x0.1 =0.05cum = 50 cudm.				
	These materials can be used for 16 times				
	hence qty for one operation 1/16 = 3.125				
	cudm				
2466	Hollock wood beams	10 cudm	3.125	217.00	67.81
2204	Carriage of Timber	cum	0.0228	60.81	1.39
	LABOUR				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
	(ii) Taking out the existing beams etc.				
	(a) LABOUR				
0155	Mason	Day	0.13	146.55	19.05
0100	Bandhani	Day	0.50	138.45	69.22
0114	Beldar	Day	0.33	135.25	44.63
	(iii) Renewal				
	(a) Materials and Labour				
2466	Hollock wood in scantling	10 cudm	306.00	217.00	6,640.20
2204	Carriage of Timber	cum	0.306	60.81	18.61
0112	Carpenter 2nd class	Day	1.00	141.60	141.60
0100	Bandhani	Day	0.50	138.45	69.22
0114	Beldar	Day	1.00	135.25	135.25
	Painting with oil preservative				
	(4x1.1)+ (2.0x0.25x0.30) =4.4+ 0.15 =4.55 sqm				
0859	Oil type wood preservative	litre	0.455	60.00	27.30
0131	Painter	Day	0.07	141.60	9.91
0115	Coolie	Day	0.07	135.25	9.47
9999	Sundries	L.S.	0.13	1.00	0.13
9999	Carriage	L.S.	1.82	1.00	1.82
9999	Brushes	L.S.	1.82	1.00	1.82
9999	Making good the holes	L.S.	20.67	1.00	20.67
9999	Sundries	L.S.	26.91	1.00	26.91
0302	Safeda Balli 125 mm dia	mtr	2.50	29.00	72.50
	TOTAL				7,446.72
	Add 1% for water charges				74.47
	TOTAL				7,521.19
	Add 15% for contractor's profit and overheads				1,128.18
	Cost of 300 Cudm				8,649.37
	Cost of 1.00 cum				28,831.23
	Say				28,831.20

14.16 Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead:

14.16.2 Above 4.00 metres and upto 5.00 metres length.

14.16.2.1 Sal wood beams

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one beam i.e. 375 cudm.				
	0.25 x 0.30m x 5.0m (long) = 0.375 cum				
	Add wastage @ 2% (0.008 cum) = 0.383 cum				
	=383 cudm				
	(I) Propping the roof				
	MATERIALS				
	125mm diameter ballies 5m long 12 nos				
	100x100mm salwood battens 1.0 metre long 6				
	nos. x 1.0x0.1 xO. 1 =60 cudm.				
	These materials can be used for 16 times				
	hence qty for one operation 1/16 = 3.75 cudm				
1199	Sal wood beams	10 cudm	3.75	218.00	81.75
2204	Carriage of Timber	cum	0.0498	60.81	3.03
	LABOUR				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
0 114	Beldar	Day	0.25	135.25	33.81
	(ii) Taking out the existing beams etc.				
	LABOUR				
0155	Mason	Day	0.25	146.55	36.64
0100	Bandhani	Day	0.63	138.45	87.22
0114	Beldar	Day	0.50	135.25	67.62
	(iii) Renewal				
	Materials and Labour				
1199	Sal wood in scantling	10 cudm	383.00	218.00	8,349.40
2204	Carriage of Timber	cum	0.383	60.81	23.29
0112	Carpenter 2nd class	Day	1.00	141.60	141.60
0100	Bandhani	Day	1.00	138.45	138.45
0 114	Beldar	Day	2.00	135.25	270.50
	Painting with oil preservative				
	(2x5x0.25)+3.0 + 2.0x0.25x0.30 = 5.5 + 0.15				
	= 5.65 sqm				
0859	Oil type wood preservative	litre	0.565	60.00	33.90
0131	Painter	Day	0.08	141.60	11.33
0115	Coolie	Day	0.08	135.25	10.82
9999	Sundries	L.S.	0.26	1.00	0.26
9999	Carriage	L.S.	2.34	1.00	2.34
9999	Brushes	L.S.	2.21	1.00	2.21
9999	Making good the holes	L.S.	20.67	1.00	20.67
9999	Sundries	L.S.	33.15	1.00	33.15
0302	Safeda balli 125 mm dia	mtr	3.75	29.00	108.75
	TOTAL				9,492.14
	Add 1% for water charges				94.92
	TOTAL				9,587.06
	Add 15% for contractor's profit and overheads				1,438.06
	Cost of 375 Cudm				11,025.12
	Cost of 1.00 cum				29,400.32
	Say				29,400.30

14.16 Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :

14.16.2 Above 4.00 metres and upto 5.00 metres length.

14.16.2.2 Hollock wood beams

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one beam i.e. 375 cudm.				
	0.25 x 0.30m x 5.0m (long) = 0.375 cum				
	Add wastage @ 2% (0.008 cum) = 0.383 cum				
	= 3 83 cudm				
	(I) Propping the roof				
	MATERIALS				
	125mm diameter bailies 5m long 12 nos				
	100x100mm salwood battens 1.0 metre long 6				
	nos. x 1.0x0.1x0.1 = 60 cudm.				
	These materials can be used for 16 times				
	hence qty for one operation 1/16 = 3.75 cudm				
2466	Hollock wood in scantling	10 cudm	3.75	217.00	81.38
2204	Carriage of Timber	cum	0.0375	60.81	2.28
	LABOUR				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
	(ii) Taking out the existing beams etc.				
	LABOUR				
0155	Mason	Day	0.25	146.55	36.64
0100	Bandhani	Day	0.63	138.45	87.22
0114	Beldar	Day	0.50	135.25	67.62
	(iii) Renewal				
	Materials and Labour				
2466	Hollock wood in scantling	10 cudm	383.00	217.00	8,311.10
2204	Carriage of Timber	cum	0.383	60.81	23.29
0112	Carpenter 2nd class	Day	1.00	141.60	141.60
0100	Bandhani	Day	1.00	138.45	138.45
0114	Beldar	Day	2.00	135.25	270.50
	Painting with oil preservative				
	(2x5x0.25)+3.0 + 2.0x0.25x0.30 = 5.5 + 0.15				
	= 5.65 sqm				
0859	Oil type wood preservative	litre	0.565	60.00	33.90
0131	Painter	Day	0.08	141.60	11.33
0115	Coolie	Day	0.08	135.25	10.82
9999	Sundries	L.S.	0.26	1.00	0.26
9999	Carriage	L.S.	2.34	1.00	2.34
9999	Brushes	L.S.	2.21	1.00	2.21
9999	Making good the holes	L.S.	20.67	1.00	20.67
9999	Sundries	L.S.	33.15	1.00	33.15
0302	Safedaballi 125 mm dia	mtr	3.75	29.00	108.75
	TOTAL				9,452.72
	Add 1 % for water charges				94.53
	TOTAL				9,547.25
	Add-15% for contractor's profit and overheads				1,432.09
	Cost of 375 Cudm				10,979.34
	Cost of 1.00 cum				29,278.24
	Say				29,278.20

14.17 Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering including disposal of rubbish to the dumping ground within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	LABOUR				
0114	Beldar	Day	0.53	135.25	71.68
0 115	Coolie	Day	0.08	135.25	10.82
0101	Bhisti	Day	0.07	138.45	9.69
9999	Sundries	L.S.	1.43	1.00	1.43
	TOTAL				93.62
	Add 1% for water charges				0.94
	TOTAL				94.56
	Add 15% for contractor's profit and overheads				14.18
	Cost of 10.00 sqm				108.74
	Cost of 1.00 sqm				10.87
	Say				10.85

14.18 Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :

14.18.1 With F.P.S. brick tiles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	MATERIALS				
	Cement mortar 1:3 (1 cement: 3 fine and)	cum	0.015	2,870.00	43.05
	(Rate as per item No. 3.3) 2% of wt. of cement				
1213	Water proofing materials	kilogram	0.153	20.00	3.06
	LABOUR				
0115	Coolie	Day	0.36	135.25	48.69
0124	Mason 2nd class	Day	0.36	141.60	50.98
0101	Bhisti	Day	0.36	138.45	49.84
9999	Sundries	L.S.	18.85	1.00	18.85
	TOTAL				214.47
	Add 1% for water charges				2.14
	TOTAL				216.61
	Add 15% for contractor's profit and overheads				32.49
	Cost of 10.00 sqm				249.10
	Cost of 1.00 sqm				24.91
	Say				24.90

14.18 Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :

14.18.2 With modular brick tiles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	MATERIALS				
	Cement mortar, 1:3 (1 cement: 3 fine sand).	cum	0.017	2870.00	48.79
	(Rate as per item No. 3.3)				
1213	Water proofing material 2% of wt. of cement	kilogram	0.173	20.00	3.46

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0115	Coolie	Day	0.36	135.25	48.69
0124	Mason 2nd class	Day	0.36	141.60	50.98
0101	Bhisti	Day	0.36	138.00	49.84
9999	Sundries	L.S.	18.85	1.00	18.85
	TOTAL				220.61
	Add 1 % for water charges				2.21
	TOTAL				222.82
	Add 15% for contractor's profit and overheads				33.42
	Cost of 10.00 sqm				256.24
	Cost of 1.00 sqm				25.62
	Say				25.60

14.19 Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs M.S. Flats 40x6mm @ 1.9kg./m = 30x1.9 = 57 kg.(A) J' hook bolts @ 30cm centre to centre = 101 Nos. x 0.15 m = 15.15 m @ 0.40kg./m = 6.06kg Total (A+B) = 63.06 kg Say 63.00 kgs				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.09	141.60	12.74
0100	Bandhani	Day	0.06	138.45	8.31
0114	Beldar	Day	0.16	135.25	21.64
	TOTAL				42.69
	Add 1% for water charges				0.43
	TOTAL				43.12
	Add-15% for contractor's profit and overheads				6.47
	Cost for 63 kg.				49.59
	Cost of 1.00 kg				0.79
	Say				0.80

14.20 Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 20.2 m wind tie				
	MATERIALS				
1023	G.I. - J or L hooks with nuts and bolts 8 mm dia @ 30 cm center to center = 68 nos	10 Nos	68.00	58.00	394.40
1208	Bitumen washer	100 Nos	68.00	18.00	12.24
1209	G.I. Washer (thick)	100 Nos	68.00	27.00	18.36
9999	Carriage of bolts, nuts and washers etc.	L.S.	1.17	1.00	1.17
	LABOUR				
0102	Blacksmith 1st class	Day	0.34	151.50	51.51
0114	Beldar	Day	0.34	135.25	45.99
9999	Sundries	L.S.	13.91	1.00	13.91
	Applying priming coat with ready mixed zink chromate yellow primer 20.2x2x(0.04+0.006) = 1.86 sqm				

Code	Description	Unit	Quantity	Rate	Amount
	(Rate as per item no 13.50.3 of SH Finishing) Painting with ready mixed black anti corrosive bitumastic paint	sqm	1.86	12.65	23.53 (A)
	('Rate as per item no 13.65.1 of SH Finishing)	sqm	1.86	24.80	46.13 (A)
	TOTAL				607.24
	Add 1% for water charges on all except 'A'				5.38
	TOTAL				612.62
	Add 15% for contractor's profit and overheads on all except 'A'				81.44
	Cost for 20.2 metres				694.06
	Cost of 1.00 metre				34.36
	Say				34.35

14.21 Renewing bottom rail and/or top rubber of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for gate of size 1.52x2.4 m (weight 11.55 kg)				
	MATERIALS				
	M.S. Tee 40x40x6 mm				
	Top rail = 1.725 m–				
	Bottom rail = 1.570 m				
	Total = 3.295 m say 3.30 m @ 3.5 kg/m = 11.55 kg				
	Add 10% wastage = 1.155 kg				
	1007 2205				
1007	Total = 12.705 kg = 0.1270 q say 0.13 q	quintal	0.13	3100.00	403.00
2205	Carriage of Tee 12.70 kg = 0.13 q	tonne	0.013	47.29	0.61
	Taking out collapsible gate including frame				
	(Rate as per item no 15.12.2 of SH Dismantling and Demolishing)	each	1.00	75.35	75.35 (A)
	Refixing of collapsible gate including mending good the demaged floor, wall etc.frame				
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	(Rate as per item no 4.2.5 of SH concrete work)	cum	0.03	3112.70	93.38 (A)
	Cement mortar, 1:6 (1 cement: 6 fine sand)	cum	0.01	1687.70	16.88
	(Rate as per item No. 3.6 of SH- mater)				
9999	Cement concrete 1:2:4 filled in chase cut	L.S.	24.18	1.00	24.18
9999	Disposal of mulba	L.S.	1.82	1.00	1.82
	Priming coat on Tees 0.16x3.3 = 0.53 sqm				
	(Rate as per item no 13.50.3 of SH Finishing)	sqm	0.53	12.65	6.70 (A)
	Labour for fixing the gate				
0155	Mason	Day	0.50	146.55	73.28
0114	Beldar	Day	0.75	135.25	101.44
9999	Sundries	L.S.	2.60	1.00	2.60
	TOTAL				799.24
	Add 1% for water charges on all except 'A'				6.24
	TOTAL				805.48
	Add 15% for contractor's profit and overheads on all except 'A'				94.51
	Cost for 11.55 kg				899.99
	Cost of 1.00 kg				77.92
	Say				77.90

14.22 Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.

14.22.1 Wheel 50 mm dia. and below.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 wheels of 40 mm dia. Materials to be dismentled Weight of 10 wheels 10x[3.14x{(4/2)x(4/2)}x4]x7.850/1000 = 3.94 kg Weight of 10 nos clamps 6 mm thick =10xlength of clamp =10x0.17m @ 1.90kg/m = 3.23 kg Weight of 10 nos 10 mm dia. Bolts, 10 cm long 10x0.10m = lm @ 0.60 kg/m = 0.60 kg Total = 7.70 kg say 8 kg Labour for dismantling:				
0103	Blacksmith 2nd class	Day	0.01	141.60	1.42
0100	Bandhani	Day	0.01	138.45	1.38
0114	Beldar	Day	0.02	135.25	2.70
9999	Sundries	L.S.	0.39	1.00	0.39
	Renewing the wheels with clamps :- MATERIALS				
7442	10 nos wheels 40 mm dia. 40 mm wide 10 nos clamps out of M.S. flat 40x6 mm, 170 mm long = 10x0.17m = 1.70m @ 1.9 kg/m = 3.23 kg Add 5% wastage = 0.16 kg	each	10.00	52.00	520.00
1008	Total = 3.39 kg say 3.50 kg	quintal	0.035	2900.00	101.50
1034	M.S. bolt/pin 10 mm dia 10 cm long 10 nos 10x0.06 = 0.6 kg = 0.006 q	quintal	0.006	4300.00	25.80
1215	Welding charges (electrical) length = 10x(2x4) = 80cm	cm	80.00	1.00	80.00
	Labour for cutting, assembling and errection charges;				
0102	Blacksmith 1st class	Day	0.03	151.50	4.54
0100	Bandhani	Day	0.02	138.45	2.77
0114	Beldar	Day	0.11	135.25	14.88
	Priming coat: = 10x2(0.06+0.008)x0.25m = 0.34 sqm Tees 0.16x3.3 = 0.53 sqm				
	(A) (Rate as per item no 13.50.3 of SH Finishing)	sqm	0.165	12.65	2.09 (A)
9999	Sundries	L.S.	1.69	1.00	1.69
	TOTAL				759.16
	Add 1% for water charges on all except 'A'				7.57
	TOTAL				766.73
	Add15% for contractor's profit and overheads on all except 'A'				114.70
	Cost for 10 wheels				881.43
	Cost for 1 wheel				88.14
	Say				88.15

14.22 Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.

14.22.2 Wheel above 50 mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 wheels Considering average wheel dia =75 mm Width of wheel =40 mm M.S. flat for clamp = 60x8 mm Bolt size 16 mm dia. Lenth of one clamp : 2x(0.04+0.0375+0.02)+0.05 =0.195+0.05=0.245m say 0.25m Materials to be dismentled Weight of 10 nos wheels 10x[3.14x{(7.5/2)x(7.5/2)}x4]x7.850/1000 = 13.87 kg Weight of 10 nos clamps 8 mm thick = 10x0.25 m @ 3.8kg/m = 9.50 kg Weight of 10 nos 16 mm dia. Bolts, 10 cm long 10x0.10 m @ 1.60 kg/m = 1.60 kg Total = 24.97 kg say 25 kg Labour for dismantling:				
0103	Blacksmith 2nd class	Day	0.04	141.60	5.66
0100	Bandhani	Day	0.03	138.45	4.15
0114	Beldar	Day	0.06	135.25	8.12
9999	Sundries	L.S.	1.04	1.00	1.04
	Renewing the wheels with clamps :- MATERIALS				
7442	10 nos wheels 75 mm dia. 40 mm wide 10 nos clamps out of M.S. flat 60x8 mm = 10x0.25 m @ 3.8 kg/m = 9.5 kg Add 5% wastage = 0.48 kg	each	10.00	52.00	520.00
1008	Total = 9.48 kg say 10 kg	quintal	0.10	2,900.00	290.00
1034	M.S. bolt/pin 16 mm dia 10 cm long 10 nos 10x0.16= 1.6 kg = 0.016 q	quintal	0.016	4,300.00	68.80
1215	Welding charges (electrical) lenth = 10x(2x6)	cm	120.00	1.00	120.00
	Labour for cutting, assembling and errection charges;				
0102	Blacksmith 1st class	Day	0.10	151.50	15.15
0100	Bandhani	Day	0.05	138.45	6.92
0114	Beldar	Day	0.36	135.25	48.69
	Priming coat: = 10x2(0.06+0.008)x0.25m = 0.34 sqm Tees 0.16x3.3 = 0.53 sqm				
	(A) (Rate as per item no 13.50.3 of SH Finishing)	sqm	0.34	12.65	4.30(A)
9999	Sundries	L.S.	5.33	1.00	5.33
	TOTAL				1,098.16
	Add 1% for water charges on all except 'A'				10.94
	TOTAL				1,109.10
	Add 15% for contractor's profit and overheads on all except 'A'				165.72
	Cost for 10 wheels				1,274.82
	Cost for 1 wheel				127.48
	Say				127.50

14.23 Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.

Code	Description	Unit	Quantity	Rate	Amount
	Details for 10.91 Kiloletre				
	Pumping hours 3 hrs. or 0.375 days				
0011	Cost of pumping water with 4000 litres per hour capacity pump	Day	0.375	300.00	112.50
0114	Beldar for clearing slush	Day	2.00	135.25	270.50
	TOTAL				383.00
	Add for water charge @ 1 %				3.83
	TOTAL				386.83
	Add for contractor's profit and over-heads @ 15%				58.02
	Cost of 10.91 Kiloletre				444.85
	Cost of 1 Kiloletre				40.77
	Say				40.75

14.24 Mud mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cum				
	MATERIALS				
0811	Mud (dry)	cum	1.08	20.00	21.60
	LABOUR				
0114	Beldar	Day	0.63	135.25	85.21
0101	Bhisti	Day	0.315	138.45	43.61
9999	Sundries	L.S.	6.45	1.00	6.45
	TOTAL				156.87
	Cost of one cum				156.87
	Say				156.85

14.25 Brick work with bricks of class designation 75 in mud mortar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	MATERIALS :				
2602	Bricks of class designation 75	1 000 Nos	494.00	1900.00	938.60
	Mud mortar (Rate as per item no. 3.18)	cum	0.25	156.85	39.21
2201	Carriage of bricks	1 000	494.00	141.88	70.09
9999	Sundries	L.S.	2.73	1.00	2.73
	LABOUR:				
0123	Mason 1st Class	Day	0.36	151.50	54.54
0124	Mason Ilnd Class	Day	0.36	141.60	50.98
0115	Coolie	Day	1.37	135.25	185.29
0101	Bhishti	Day	0.20	138.45	27.69
	TOTAL				1,369.13
	Add 1% for water charges				13.69
	TOTAL				1,382.82
	Add for contractor's profit and overheads @ 15%				207.42
	Cost of 1 Cum.				1,590.24
	Say				1,590.25

14.26 Providing and fixing 25 mm thick shutters for cup board etc. :

14.26.1 Panelled or panelled & glazed shutters:

14.26.1.1 Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for shutter of cup-board 200xl08cm = 2.16 sqm. Materials: Styles- 4x200x8.0x2.5cm = 0.016 cum+ Rails- Top rail- 1x110.5x8.0x2.5cm = 0.0022 cum+ Lock and bottom rails 2x110.5x8.0x2.5 cm = 0.0044 Panels 2x48x41x1.6cm = 0.006 cum+ Sash bars- 2x114x3.8x2.5cm = 0.003cum+ 6x48x3.8x2.5cm = 0.003 cum+ Beading- 16x92x1.4x1.2cm = 0.002cum Total = 0.0366 Add for wastage @ 10% = 0.0037 cum. Grand Total = 0.0403 cum.				
1186	Superior class teak wood	10 cudm	40.00	895.00	3,580.00
2204	Carriage of timber	cum	0.04	60.81	2.43
2406	Glasses 10kg/sqm 4mm thick	sqm	0.99	248.00	245.52
	Fittings-				
0608	Nickle plated bright finished M.S. Piano hinges	metre	4.00	21.00	84.00
0639	Screws 25 mm	100 Nos	120.00	15.00	18.00
	Labour-				
0111	Carpenter I class	Day	2.40	151.00	363.60
0119	Glazier	Day	0.18	141.60	25.49
0114	Beldar	Day	0.77	135.25	104.14
9999	Sundries	L.S.	40.43	1.00	40.43
	TOTAL				4,463.61
	Add 1% for water charges				44.64
	TOTAL				4,508.25
	Add 15% for contractor's profit and overheads				676.24
	Cost of 2.16 sqm.				5,184.49
	Cost of 1 sqm.				2,400.23
	Say				2,400.25

14.26 Providing and fixing 25 mm thick shutters for cup board etc.:

14.26.1 Panelled or panelled & glazed shutters :

14.26.1.2 1st class teak wood including nickel plated bright finished M.S piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for shutters of a cup-board (half glazed and half panelled) 200xl08cm = 2.16 sqm. Materials:				

Code	Description	Unit	Quantity	Rate	Amount
	Styles- 4x200x8.0x2.5cm = 0.016 cum+ Rails- Top rail- 1x110.5x8.0x2.5cm = 0.0022cum+ Lock and bottom rail- 2x110.5x8.0x2.5cm = 0.0044 cum. Panels- 2x48x41xl.6cm = 0.006cum+ Sash bars- 2x114x3.8x2.5cm = 0.003cum+ 6x48x3.8x2.5cm = 0.003 cum+ Beading- 16x92x 1.4x 1.2cm = 0.002cum Total = 0.0366 Add for wastage @ 10% = 0.0037 cum. Grand Total = 0.0403 cum.				
1188	First class teak wood in planks	10 cudm	40.00	506.00	2,024.00
2204	Carriage of timber	cum	0.04	60.81	2.43
2406	Glasses lOkg/sqm 4mm thick	sqm	0.99	248.00	245.52
	Fittings-				
0608	Nickle plated bright finished M.S. Piano hinges	metre	4.00	21.00	84.00
0639	Screws 25mm	100 Nos	120.00	15.00	18.00
	Labour-				
0111	Carpenter I class	Day	2.40	151.50	363.60
0119	Glazier	Day	0.18	141.60	25.49
0114	Beldar	Day	0.77	135.25	104.14
9999	Sundries	L.S.	40.43	1.00	40.43
	TOTAL				2,907.61
	Add 1% for water charges				29.08
	TOTAL				2,936.69
	Add 15% for contractor's profit and overheads				440.50
	Cost of 2.16 sqm.				3,377.19
	Cost of 1 sqm.				1,563.51
	Say				1,563.50

14.26 Providing and fixing 25 mm thick shutters for cup board etc. :
14.26.2 Glazed shutters:
14.26.2.1 Superior class teak wood including nickel plated bright finished MS. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for shutter of cup-board 200x108cm = 2.16 sqm. Materials : (i) Teak wood first class Styles : 4x200x9.5x2.5 cm = 0.019 cum Rails Top & intermediate rails 2x110.5x9.5x2.5 cm = 0.006 cum Lock and bottom rails 2x110.5x19.7x2.5 cm = 0.011 cum Beadings- 2x186.lxl.9xl.2cm = 0.001cum+ 4x 171.70x 1.9x 1.2cm = 0.002cum. Total = 0.039 cum. Add for wastage @ 10% = 0.004 cum. Grand Total = 0.043 cum.				
1186	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	10 cudm	43.00	895.00	3 848.50

Code	Description	Unit	Quantity	Rate	Amount
2406	(ii) Glasses (lOkg/sqm) 4.0mm thick	sqm	1.27	248.00	314.96
0608	(iii) Piano hinges-75x45x3.2 mm	metre	4.00	21.00	84.00
0639	(iv)M.S. screws 25 mm	100 Nos	120.00	15.00	18.00
0597	M.S. butt hinges50x37x 1.50 mm	10 Nos	2.00	28.00	5.60
0640	M.S. screws 20 mm	100 Nos	8.00	15.00	1.20
2204	(v) Carriage of timber	cum	0.043	60.81	2.61
	Labour:				
0156	Carpenter (Avg.)	Day	1.83	146.55	268.19
0119	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.77	135.25	104.14
9999	Sundries	L.S.	40.43	1.00	40.43
	TOTAL				4,720.20
	Add 1% for water charges				47.20
	TOTAL				4,767.40
	Add 15% for contractor's profit and overheads				715.11
	Cost of 2.16 sqm.				5,482.51
	Cost of 1 sqm.				2,538.20
	Say				2,538.20

14.26 Providing and fixing 25 mm thick shutters for cup board etc. :
14.26.2 Glazed shutters :
14.26.2.2 1st class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for shutter of cup-board 200x108cm = 2.16 sqm. Materials : (i) Teak wood first class Styles : 4x200x9.5x2.5 cm = 0.019 cum Rails Top & intermediate rails 2x110.5x9.5x2.5 cm = 0.006 cum Lock and bottom rails 2x110.5x19.7x2.5 cm = 0.011 cum Beadings- 2x186. lxl.9x1.2cm = 0.001cum+ 4xl71.70xl.9xl.2cm = 0.002cum. Total = 0.039 cum. Add for wastage @ 10% = 0.004 cum. Grand Total = 0.043 cum.				
1188	Teak wood First class	10 cudm	43.00	506.00	2,175.80
2406	(ii) Glasses (lOkg/sqm) 4.0mm thick	sqm	1.27	248.00	314.96
0608	(iii) Piano hinges-75x45x3.2 mm	metre	4.00	21.00	84.00
0639	(iv)M.S. screws 25 mm	100 Nos	120.00	15.00	18.00
0597	M.S. butt hinges50x37xl .50 mm	10 Nos	2.00	28.00	5.60
0640	M.S. screws 20 mm	100 Nos	8.00	15.00	1.20
2204	(v) Carriage of timber	cum	0.043	60.81	2.61
	Labour:				
0156	Carpenter (Avg.)	Day	1.83	146.55	268.19
0119	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.77	135.25	104.14
9999	Sundries	L.S.	40.43	1.00	40.43
	TOTAL				3,047.50
	Add 1 % for water charges				30.48
	TOTAL				3,077.98
	Add 15% for contractor's profit and overheads				461.70
	Cost of 2.16 sqm.				3,539.68
	Cost of 1 sqm.				1,638.74
	Say				1,638.75

14.27 Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35xl0mm laths placed 35mm apart (frames to be paid separately) including fixing 50x12mm beading complete with

14.27.1 Second class teak wood.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of a jaffri shutter 176x86 cm = 1.51 sqm Materials Teak wood 2nd class Styles 2x176x7.5x3.5 cm = 0.0092 cum Rails 3x86x7.5x3.5 = 0.0068 cum Total 0.0160 cum Add wastage @ 10 % =0.0016 cum Total = 0.0176 cum Say 18 cudm				
1190	Teak wood 2nd class	10 cudm	18.00	410.00	738.00
2204	Carriage of timber	cum	0.018	60.81	1.09
	Plain Jaffri work				
	(Rate as per item no. 9.41.1)	sqm	1.51	890.00	1,343.90(A)
0595	Iron hinges 100x58x 1.9 mm	10 Nos	6.00	54.00	32.40
0597	Iron hinges 50x37x1.5 mm	10 Nos	2.00	28.00	5.60
0637	Screws 40 mm	100 Nos	48.00	30.00	14.40
0640	Screws 20 mm	100 Nos	8.00	15.00	1.20
	LABOUR				
	(For making frame and fixing fitting)				
0112	Carpenter 2nd class	Day	0.30	141.60	42.48
	TOTAL				2,179.07
	Add 1% for water charges on all except 'A'				8.35
	TOTAL				2,187.42
	Add 15% for contractor's profit and overheads on all except 'A'				126.53
	Cost of 1.51 sqm.				2,313.95
	Cost of 1 sqm.				1,532.42
	Say				1,532.40

14.28 Providing and fixing curtain rods of 1.25mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.

14.28.1 20 mm diameter.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 2 m long Materials				
0444	Brass curtain rod 20 mm dia	metre	2.00	63.00	126.00
0446	Brass bracket	each	2.0 Nos	24.00	48.00
9999	Screws	L.S.	2.73	1.00	2.73
9999	Carriage	L.S.	1.56	1.00	1.56
	Wooden plugs including cutting brick work and fixing in cement mortar				
	(A) (Rate as per item no 9.32)	each	2.00	10.15	20.30 (A)

Code	Description	Unit	Quantity	Rate	Amount
9999	Labour	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	1.56	1.00	1.56
	TOTAL				202.88
	Add 1% for water charges on all except 'A'				1.83
	TOTAL				204.71
	Add 15% for contractor's profit and overheads on all except 'A'				27.66
	Cost of 2 m				232.37
	Cost of 1 m				116.19
	Say				116.20

14.28 Providing and fixing curtain rods of 1.25mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.

14.28.2 25 mm diameter.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 2 m long				
	Materials				
0445	Brass curtain rod 25 mm dia	metre	2.00	79.00	158.00
0446	Brass bracket	each	2.00	24.00	48.00
9999	Screws	L.S.	2.73	1.00	2.73
9999	Carriage	L.S.	1.56	1.00	1.56
	Wooden plugs including cutting brick work and fixing in cement mortar				
	A (Rate as per item no 9.32)	each	2.00	10.15	20.30 (A)
9999	Labour	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	1.56	1.00	1.56
	TOTAL				234.88
	Add 1% for water charges on all except 'A'				2.15
	TOTAL				237.03
	Add 15% for contractor's profit and overheads on all except 'A'				32.51
	Cost of 2 m				269.54
	Cost of 1 m				134.77
	Say				134.75

14.29 Providing and fixing M.S. round or square bars with M.S. flats at required spcing in wooden frames of windows and clerestory windows.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for window -140x110cm				
	Materials:				
	M.S. bar 16 mm dia 13x136 cm = 17.68 m @ 1.57 kg/m = 27.93 kg				
	Add for wastage @ 10% =2.79 kg				
	Total = 30.72 kg or 0.307 q				
1003	M.S. bar	quintal	0.307	3,050.00	936.35
	M.S. flat 40x6mm 2x96cm = 192cm+ 1x110cm = 110cm				
	= 302cm+				
	Add wastage @ 10% = 30cm				
	Total = 332cm.@ 1.90 kg/m = 6.31 kg Say 0.063 quintal				
1008	M.S. flat	quintal	0.063	2,900.00	182.70
2205	Carriage of steel (0.307+0.063 = 0.37 q = 0.037 t)	tonne	0.037	47.29	1.75

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	26.91	1.00	26.91
	Labour-				
0103	Blacksmith 2nd class	Day	0.35	141.60	49.56
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.45	135.25	60.86
	TOTAL				1,286.45
	Add for water charge @ 1 %				12.86
	TOTAL				1,299.31
	Add for contractor's profit and overheads @ 15%				194.90
	Cost of 33.67 kg.(5.74+27.93=33.67kg)				1,494.21
	Cost per kg.				44.38
	Say				44.40

14.30 Providing joists (karries) including hoisting fixing in position and applying wood preservative on unexposed surface etc. complete with:

14.30.1 Sal wood.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 300cudm.				
	Materials-				
	Sal wood				
	10x30xl0x30cm = 0.30 cum. or = 300 cudm.+				
	Add wastage @ 2% = 6.00 cudm.				
	Total = 306 cudm.				
1199	Sal wood	10 cudm	306.0	218.00	6,670.80
2204	Carriage of timber	cum	0.306	60.81	18.61
	Labour-				
0112	Carpenter 2nd class	Day	0.70	141.60	99.12
0114	Beldar	Day	1.45	135.25	196.11
0100	Bandhani	Day	0.70	138.45	96.92
	Priming coat (Wood preservative)				
	(Rate as per item no 13 .57.1)	sqm	0.80	12.80	10.24 (A)
9999	Sundries	L.S.	26.91	1.00	26.91
	TOTAL				7,118.71
	Add for water charge @ 1 % on all except (A)				71.08
	TOTAL				7,189.79
	Add for contractor's profit and overheads @ 15°/o on all except (A)				1,076.93
	Cost for 300 cudm.				8,266.72
	Cost of 1 cum.				27,555.73
	Say				27,555.70

14.30 Providing joists (karries) including hoisting fixing in position and applying wood preservative on unexposed surface etc. complete with:

14.30.2 Hollock wood.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 300cudm.				
	Materials-				
	Hollock wood in scantling				
	10x30xl0x30cm = 0.30 cum. or = 300 cudm.+				
	Add wastage @ 2% = 6.00 cudm.				
	Total = 306 cudm.				
2466	Hollock wood in scantling	10 cudm	306.00	217.00	6,640.20
2204	Carriage of timber	cum	0.306	60.81	18.61

Code	Description	Unit	Quantity	Rate	Amount
	Labour-				
0112	Carpenter 2nd class	Day	0.70	141.60	99.12
0114	Beldar	Day	1.45	135.25	196.11
0100	Bandhani	Day	0.70	138.45	96.92
	Priming coat (Wood preservative)				
(A)	(Rate as per item no 13.57.1)	sqm	0.80	12.80	10.24 (A)
9999	Sundries	L.S.	26.91	1.00	26.91
	TOTAL				7,088.11
	Add for water charge @ 1% on all except (A)				70.78
	TOTAL				7,158.89
	Add for contractor's profit and overheads @ 15% on all except (A)				1,072.30
	Cost for 300 cudm.				8,231.19
	Cost of 1 cum.				27,437.30
	Say				27,437.30

14.31 Providing and fixing bright finished brass single acting spring hinges with necessary screws etc. complete :

14.31.1 150 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0389	Brass spring hinges 150 mm	each	10.00Nos	200.00	2,000.00
0449	Brass screws 50 mm	100 Nos	80.00	107.00	85.60
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				2,176.89
	Add for water charge @ 1%				21.77
	TOTAL				2,198.66
	Add for contractor's profit and overheads @ 15%				329.80
	Cost of 10 hinges				2,528.46
	Cost of 1 hinge				252.85
	Say				252.85

14.31 Providing and fixing bright finished brass single acting spring hinges with necessary screws etc: complete :

14.31.2 125 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0390	Brass spring hinges 125 mm	each	10 Nos	158.00	1,580.00
0449	Brass screws 50mm	100 Nos	80 Nos	107.00	85.60
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				1,756.89
	Add for water charge @ 1%				17.57
	TOTAL				1,774.46
	Add for contractor's profit and overheads @ 15%				266.17
	Cost of 10 hinges				2,040.63
	Cost of 1 hinge				204.06
	Say				204.05

14.31: Providing and fixing bright finished brass single acting spring hinges with necessary screws etc. complete :

14.31.3: 100 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0391	Brass spring hinges 100 mm	each	10.00	106.00	1,060.00
0450	Brass screws 40 mm	100 Nos	80.00	96.00	76.80
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				1,228.09
	Add for water charge @ 1%				12.28
	TOTAL				1,240.37
	Add for contractor's profit and overheads @15%				186.06
	Cost of 10 hinges				1,426.43
	Cost of 1 hinge				142.64
	Say				142.65

14.32: Providing and fixing bright finished brass double acting spring hinges with necessary screws etc. complete :

14.32.1: 150 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0392	Brass double acting spring hinges 150 mm	each	10.00	317.00	3,170.00
0449	Brass screws 50 mm	100 Nos	80.00	107.00	85.60
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				3,346.89
	Add for water charge @ 1 %				33.47
	TOTAL				3,380.36
	Add for contractor's profit and overheads @15%				507.05
	Cost of 10 hinges				3,887.41
	Cost of 1 hinge				388.74
	Say				388.75

14.32 : Providing and fixing bright finished brass double acting spring hinges with necessary screws etc. complete :

14.32.2 :125 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0393	Brass double acting spring hinges 125 mm	each	10.00	216.00	2,160.00
0449	Brass screws 50 mm	100 Nos	80.00	107.00	85.60
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				2,336.89
	Add for water charge @ 1 %				23.37

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				2,360.26
	Add for contractor's profit and overheads @15%				354.04
	Cost of 10 hinges				2,714.30
	Cost of 1 hinge				271.43
	Say				271.45

14.32 Providing and fixing bright finished brass double acting spring hinges with necessary screws etc. complete :

14.32.3 100 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0394	Brass double acting spring hinges 100 mm	each	10.00	173.00	1,730.00
0450	Brass screws 40 mm	100 Nos	80.00	96.00	76.80
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				1,898.09
	Add for water charge @ 1%				18.98
	TOTAL				1,917.07
	Add for contractor's profit and overheads @15%				287.56
	Cost of 10 hinges				2,204.63
	Cost of 1 hinge				220.46
	Say				220.45

14.33 : Providing and fixing bright finished brass flush bolts with necessary screws etc. complete :

14.33.1: 250 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0404	Brass flush bolt 250 mm	each	10.0	84.00	840.00
0452	Brass screws 25 mm	100 Nos	60.0	76.00	45.60
9999	Carriage of materials	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.20	151.50	30.30
	TOTAL				919.54
	Add for water charge @ 1 %				9.20
	TOTAL				928.74
	Add for contractor's profit and overheads @15%				139.31
	Cost of 10 flush bolt				1,068.05
	Cost of 1 flush bolt				106.81
	Say				106.80

14.33: Providing and fixing bright finished brass flush bolts with necessary screws etc. complete :

14.33.2: 150 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0405	Brass flush bolt 150 mm	each	10.00	65.00	650.00
0452	Brass screws 25 mm	100 Nos	60.00	76.00	45.60

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Labour-				
0111	Carpenter 1st class	Day	0.17	151.50	25.76
	TOTAL				724.09
	Add for water charge @ 1 %				7.24
	TOTAL				731.33
	Add for contractor's profit and overheads @15%				109.70
	15 %				
	Cost of 10 flush bolt				841.03
	Cost of 1 flush bolt				84.10
	Say				84.10

14.33 : Providing and fixing bright finished brass flush bolts with necessary screws etc. complete :

14.33.3: 100 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0406	Brass flush bolt 100 mm	each	10.00	44.00	440.00
0452	Brass screws 25 mm	100 Nos	60.00	76.00	45.60
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Labour-				
0111	Carpenter 1st class	Day	0.17	151.50	25.76
	TOTAL				514.09
	Add for water charge @ 1%				5.14
	TOTAL				519.23
	Add for contractor's profit and overheads @15%				77.88
	Cost of 10 flush bolt				597.11
	Cost of 1 flush bolt				59.71
	Say				59.70

14.34 : Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, screws etc. to suit shutter thickness complete

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0417	Brass door stopper 150 mm	each	10.0	104.00	1040.00
0450	Brass screws 40 mm	100 Nos	40.0	96.00	38.40
9999	Carriage of material	L.S.	2.73	1.00	2.73
	Labour-				
0111	Carpenter 1st class	Day	0.07	151.50	10.60
9999	Sundries (wooden plugs including fixing in the floor)	L.S.	6.37	1.00	6.37
	TOTAL				1,098.10
	Add for water charge @ 1%				10.98
	TOTAL				1,109.08
	Add for contractor's profit and overheads @ 15%				166.36
	Cost of 10 floor door stoppers				1,275.44
	Cost of 1 floor door stopper				127.54
	Say				127.55

14.35 : Providing and fixing bright finished brass hard drawn hooks and eyes :
14.35.1: 300 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0418	Bright finished brass hooks & eyes 300 mm	10 Nos	10.00	457.00	457.00
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
	TOTAL				467.00
	Add for water charge @ 1%				4.67
	TOTAL				471.67
	Add for contractor's profit and overheads @ 15%				70.75
	Cost of 10 hooks and eyes				542.42
	Cost of 1 hook and eye				54.24
	Say				54.25

14.35 : Providing and fixing bright finished brass hard drawn hooks and eyes :
14.35.2 250 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0419	Bright finished brass hooks & eyes 250 mm	10 Nos	10.00	423.00	423.00
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
	TOTAL				433.00
	Add for water charge @ 1%				4.33
	TOTAL				437.33
	Add for contractor's profit and overheads @ 15%				65.60
	Cost of 10 hooks and eyes				502.93
	Cost of 1 hook and eye				50.29
	Say				50.30

14.35 : Providing and fixing bright finished brass hard drawn hooks and eyes :
14.35.3 : 200 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0420	Bright finished brass hooks & eyes 200 mm	10 Nos	10.00	390.00	390.00
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
	TOTAL				400.00
	Add for water charge @ 1 %				4.00
	TOTAL				404.00
	Add for contractor's profit and overheads @15%				60.60
	Cost of 10 hooks and eyes				464.60
	Cost of 1 hook and eye				46.46
	Say				46.45

14.35 : Providing and fixing bright finished brass hard drawn hooks and eyes :
14.35.4: 150 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0421	Bright finished brass hooks & eyes 150 mm	10 Nos	10.00	364.00	364.00
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
	TOTAL				374.00
	Add for water charge @ 1 %				3.74
	TOTAL				377.74
	Add for contractor's profit and overheads @ 15%				56.66
	Cost of 10 hooks and eyes				434.40
	Cost of 1 hook and eye				43.44
	Say				43.45

14.35: Providing and fixing bright finished brass hard drawn hooks and eyes :
14.35.5: 100 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0422	Bright finished brass hooks & eyes 100 mm	10 Nos	10.00	300.00	300.00
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
	TOTAL				310.00
	Add for water charge @ 1 %				3.10
	TOTAL				313.10
	Add for contractor's profit and overheads @ 15%				46.96
	Cost of 10 hooks and eyes				360.06
	Cost of 1 hook and eye				36.01
	Say				36.00

14.36 : Providing and fixing bright finished brass fan light pivot with necessary screws etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0429	Brass fan light pivot	10 Nos	10.00	128.00	128.00
0450	Brass screws 40 mm	100 Nos	40.00	96.00	38.40
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.08	151.50	12.12
	TOTAL				179.43
	Add for water charge @ 1 %				1.79
	TOTAL				181.22
	Add for contractor's profit and overheads @15%				27.18
	Cost of 10 fanlight pivot				208.40
	Cost of 1 fanlight pivot				20.84
	Say				20.85

14.37 Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary screws etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0430	Brass chain with hook 300 mm long	each	10.00	13.00	130.00
0452	Brass screws 25 mm	100 Nos	40.00	76.00	30.40
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.10	151.50	15.15
	TOTAL				176.46
	Add for water charge @ 1 %				1.76
	TOTAL				178.22
	Add for contractor's profit and overheads @ 15%				26.73
	Cost of 10 chain with hooks				204.95
	Cost of 1 chain with hooks				20.50
	Say				20.50

14.38 Providing and fixing bright finished brass quadrant stay 300mm long with necessary screws etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0427	Brass quadrant stay 300 mm long	each	10.00	73.00	730.00
0452	Brass screws 25 mm	100 Nos	40.00	76.00	30.40
9999	Carriage of material				
	Labour-	L.S.	0.91	1.00	0.91
0111	Carpenter 1st class	Day	0.10	151.50	15.15
	TOTAL				776.46
	Add for water charge @ 1 %				7.76
	TOTAL				784.22
	Add for contractor's profit and overheads @15%				117.63
	Cost of 10 quadrant stayes				901.85
	Cost of 1 quadrant staye				90.19
	Say				90.20

14.39 : Providing and fixing bright finished brass helical door spring (superior quality).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0442	Helical door spring (superior quality) 150 mm	each	10.00	185.00	1,850.00
0449	Brass screws 50 mm	100 Nos	40.00	107.00	42.80
0452	Brass screws 25 mm	100 Nos	20.00	76.00	15.20
	Labour-				
0111	Carpenter 1st class	Day	0.40	151.50	60.60
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				1,995.65
	Add for water charge @ 1 %				19.96
	TOTAL				2,015.61
	Add for contractor's profit and overheads @15%				302.34
	Cost of 10 door springs				2,317.95
	Cost of 1 door spring				231.80
	Say				231.80

14.40 Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.

14.40.1 125x70x4 mm (ordinary type)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0525	Brass butt hinges (chromium plated) 125x70x4 mm (ordinary type)	10 Nos	10.0	433.00	433.00
0585	Brass screws 50 mm	100 Nos	100.0	123.00	123.00
9999	Carriage of material	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1 st class	Day	0.14	151.50	21.21
0114	Beldar	Day	0.10	135.25	13.52
	TOTAL				594.37
	Add for water charge @ 1%				5.94
	TOTAL				600.31
	Add for contractor's profit and overheads @15%				90.05
	Cost for 10 nos.				690.36
	Cost of 1 no.				69.04
	Say				69.05

14.40: Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.

14.40.2 : 100x70x4 mm (ordinary type)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0526	Brass butt hinges (chromium plated) 100x70x4 mm (ordinary type)	10 Nos	10.00	385.00	385.00
0586	Brass screws 40 mm	100 Nos	80.00	105.00	84.00
9999	Carriage of material	L.S.	3.64	1.00	3.64
	Labour-				
0111	Carpenter 1st class	Day	0.14	151.50	21.21
0114	Beldar	Day	0.10	135.25	13.52
	TOTAL				507.37
	Add for water charge @ 1 %				5.07
	TOTAL				512.44
	Add for contractor's profit and overheads @ 15%				76.87
	Cost for 10 nos.				589.31
	Cost of 1 no.				58.93
	Say				58.95

14.40: Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.

14.40.3 : 75x65x4 mm (heavy type)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0524	Brass butt hinges (chromium plated) 75x65x4 mm (heavy type)	10 Nos	10.00	430.00	430.00
0587	Brass screws 30 mm	100 Nos	60.00	90.00	54.00
9999	Carriage of material	L.S.	1.82	1.00	1.82
	Labour-				

Code	Description	Unit	Quantity	Rate	Amount
0111	Carpenter 1st class	Day	0.14	151.50	21.21
0114	Beldar	Day	0.10	135.25	13.52
	TOTAL				520.55
	Add for water charge @ 1%				5.21
	TOTAL				525.76
	Add for contractor's profit and overheads @15%				78.86
	Cost for 10 nos.				604.62
	Cost of 1 no.				60.46
	Say				60.45

14.40 : Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.

14.40.4: 75x40x2.5 mm (ordinary type)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0527	Brass butt hinges (chromium plated) 75x40x2.5 mm (ordinary type)	10 Nos	10.00	135.00	135.00
0587	Brass screws 30 mm	100 Nos	60.00	90.00	54.00
9999	Carriage of material	L.S.	1.82	1.00	1.82
	Labour-				
0111	Carpenter 1st class	Day	0.14	151.50	21.21
0114	Beldar	Day	0.10	135.25	13.52
	TOTAL				225.55
	Add for water charge @ 1 %				2.26
	TOTAL				227.81
	Add for contractor's profit and overheads@ 15%				34.17
	Cost for 10 nos.				261.98
	Cost of 1 no.				26.20
	Say				26.20

14.40 : Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.

14.40.5 : 50x40x2.5 mm (ordinary type)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	Materials-				
0528	Brass butt hinges (chromium plated) 50x40x2.5 mm (ordinary type)	10 Nos	10.00	105.00	105.00
0589	Brass screws 20 mm	100 Nos	40.00	63.00	25.20
9999	Carriage of material	L.S.	0.91	1.00	0.91
	Labour-				
0111	Carpenter 1st class	Day	0.08	151.50	12.12
	TOTAL				143.23
	Add for water charge @ 1 %				1.43
	TOTAL				144.66
	Add for contractor's profit and overheads @15%				21.70
	Cost for 10 nos.				166.36
	Cost of 1 no.				16.64
	Say				16.65

14.41 Providing and fixing 85x42mm chromium plated brass pull bolt lock with necessary screws, nuts, bolts and washers etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos				
	Materials-				
2467	Chromium plated brass pull bolt lock including bolts, nuts & washers	each	10.0	130.00	1300.00
9999	Carriage of materials & sundries	L.S	6.37	1.00	6.37
	Labour-				
0112	Carpenter 2nd class	Day	0.25	141.60	35.40
	TOTAL				1341.77
	Add for water charge @ 1 %				13.42
	TOTAL				1355.19
	Add for contractor's profit and overheads @ 15%				203.28
	Cost of 10 nos.				1558.47
	Cost of 1 no.				155.85
	Say				155.85

14.42 : White washing with lime to give an even shade :
14.42.1: Old work (two or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	Materials-				
0775	Dehradun white lime	quintal	0.02	295.00	5.90
9999	Carriage of lime	L.S.	0.52	1.00	0.52
	Labour-				
0141	White Washer	Day	0.11	138.45	15.23
0115	Coolie	Day	0.06	135.25	8.12
9999	Indigo gum etc	L.S.	2.73	1.00	2.73
9999	Sundries ladders etc	L.S.	2.73	1.00	2.73
	TOTAL				35.23
	Add 1% for water charges				0.35
	TOTAL				35.58
	Add 15% for contractor's profit and overheads				5.34
	Cost of 10.00 sqm				40.92
	Cost of 1.00 sqm				4.09
	Say				4.10

14.42 : White washing with lime to give an even shade :
14.42.2 : Old work (one or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	Materials-				
0775	Dehradun white lime	quintal	0.01	295.00	2.95
9999	Carriage of lime	L.S.	0.52	1.00	0.52
	Labour-				
0141	White Washer	Day	0.07	138.45	9.69
0115	Coolie	Day	0.03	135.25	4.06
9999	Indigo gum etc	L.S.	2.08	1.00	2.08
9999	Sundries ladders etc	L.S.	2.73	1.00	2.73
	TOTAL				22.03
	Add 1% for water charges				0.22

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				22.25
	Add 15 % for contractor's profit and overheads				3.34
	Cost of 10.00 sqm				25.59
	Cost of 1.00 sqm				2.56
	Say				2.55

14.43 Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Labour-				
0114	Beldar	Day	0.09	135.25	12.17
0115	Coolie	Day	0.04	135.25	5.41
0101	Bhishti	Day	0.04	138.45	5.54
9999	Sundries such as sand paper and scrapper	L.S.	2.73	1.00	2.73
9999	Repair to scraches	L.S.	1.82	1.00	1.82
	TOTAL				27.67
	Add for water charge @ 1%				0.28
	TOTAL				27.95
	Add for contractor's profit and overheads @15%				4.19
	Cost of 10 sqm.				32.14
	Cost of 1 sqm.				3.21
	Say				3.20

14.44: Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Materials-				
0815	Dry distemper	kilogram	1.00	26.00	26.00
9999	Carriage of distemper	L.S.	0.91	1.00	0.91
9999	Brushes, sand-paper etc.	L.S.	5.33	1.00	5.33
	Labour-				
0131	Painter	Day	0.33	141.60	46.73
0115	Coolie	Day	0.17	135.25	22.99
9999	Sundries	L.S.	4.42	1.00	4.42
	TOTAL				106.38
	Add for water charge @ 1 %				1.06
	TOTAL				107.44
	Add for contractor's profit and overheads @15%				16.12
	Cost of 10 sqm.				123.56
	Cost of 1 sqm.				12.36
	Say				12.35

14.45 Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :

14.45.1: Old work (one or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Materials-				
0816	Oil bound washable distemper	kilogram	1.00	40.00	40.00
9999	Brushes, putty etc.	L.S.	0.52	1.00	0.52
9999	Sundries including carriage	L.S.	10.79	1.00	10.79

Code	Description	Unit	Quantity	Rate	Amount
	Labour-				
0131	Painter	Day	0.33	141.60	46.73
0115	Coolie	Day	0.17	135.25	22.99
9999	Sundries	L.S.	7.15	1.00	7.15
	TOTAL				128.18
	Add for water charge @ 1 %				1.28
	TOTAL				129.46
	Add for contractor's profit and overheads @ 15%				19.42
	Cost of 10 sqm.				148.88
	Cost of 1 sqm.				14.89
	Say				14.90

14.46 : Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Labour-				
0114	Beldar	Day	0.11	135.25	14.88
0115	Coolie	Day	0.05	135.25	6.76
0101	Bhishti	Day	0.05	138.45	6.92
9999	Scrapper, sand paper etc.	L.S.	6.24	1.00	6.24
9999	Sundries including mortar to repair the surface	L.S.	1.82	1.00	1.82
	TOTAL				36.62
	Add for water charge @ 1 %				0.37
	TOTAL				36.99
	Add for contractor's profit and overheads @15%				5.55
	Cost of 10 sqm.				42.54
	Cost of 1 sqm.				4.25
	Say				4.25

14.47 : Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :

14.47.1: Old work (one or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Materials-				
0845	Roofing paint	litre	0.46	95.00	43.70
9999	Carriage	L.S.	0.52	1.00	0.52
	Labour-				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Putty, brushes sand paper etc.	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				158.71
	Add for water charge @ 1%				1.59
	TOTAL				160.30
	Add for contractor's profit and overheads @15%				24.04
	Cost of 10 sqm.				184.34
	Cost of 1 sqm.				18.43
	Say				18.45

14.48 : Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture over and including a priming coat of ready mixed zinc chromate yellow primer on new work :

14.48.1: 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Area=22/7 x0.0814 x30m =7.67sqm				
	MATERIALS				
4202	Zinc chromate red oxide primer	litre	0.41	58.00	23.78
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.18	141.60	25.49
0115	Coolie	Day	0.18	135.25	24.34
9999	Brushes, sand paper etc	L.S.	8.19	1.00	8.19
	MATERIALS				
0828	Anticorrosive bituminous paint (black)	Day	0.73	52.00	37.96
9999	Carriage	Day	1.04	1.00	1.04
	LABOUR				
0131	Painter	Day	0.41	141.60	58.06
0115	Coolie	Day	0.41	135.25	55.45
9999	Putty, sand paper etc	L.S.	4.16	1.00	4.16
9999	Sundries	L.S.	6.24	1.00	6.24
9999	Wire brushes for cleaning	L.S.	4.42	1.00	4.42
9999	Extra for delays	L.S.	40.30	1.00	40.30
	TOTAL				289.82
	Add 1% for water charges				2.90
	TOTAL				292.72
	Add 15% for contractor's profit and overheads				43.91
	Cost of 30.00 mtrs				336.63
	Cost of 1.00 metre				11.22
	Say				11.20

14.49 : Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :

14.49.1: 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Area=22/7 x0.0814x30m =7.67sqm				
	MATERIALS				
0828	Anticorrosive bituminous paint (black)	litre	0.43	52.00	22.36
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.27	141.60	38.23
0115	Coolie	Day	0.27	135.25	36.52
9999	Putty, sand paper etc	L.S.	4.16	1.00	4.16
9999	Sundries	L.S.	6.24	1.00	6.24
9999	Wire brushes for cleaning	L.S.	4.42	1.00	4.42
9999	Extra for delays	L.S.	26.91	1.00	26.91
	TOTAL				139.23
	Add 1 % for water charges				1.39
	TOTAL				140.62
	Add 15 % for contractor's profit and overheads				21.09
	Cost of 30.00 mtrs				161.71
	Cost of 1.00 metre				5.39
	Say				5.40

14.50: Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with aluminium paint of approved brand and manufacture over a priming coat of ready mixed zinc chromate yellow primer on new work :

14.50.1 : 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 mtrs				
	Area =22/7x0.0814x30=7.67sqm				
	MATERIALS				
4202	Red oxide Zinc chromate primer	litre	0.41	58.00	23.78
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.18	141.60	25.49
0115	Coolie	Day	0.18	135.25	24.34
9999	Sundries	L.S.	8.19	1.00	8.19
	MATERIALS				
0826	Aluminium paint	litre	0.61	89.00	54.29
9999	Carriage	L.S.	1.04	1.00	1.04
9999	Putty, sand paper etc	L.S.	4.16	1.00	4.16
	LABOUR				
0131	Painter	Day	0.41	141.60	58.06
0115	Coolie	Day	0.41	135.25	55.45
9999	Sundries	L.S.	5.20	1.00	5.20
9999	Wire brushes for cleaning	L.S.	9.10	1.00	9.10
9999	Extra for delays	L.S.	44.85	1.00	44.85
	TOTAL				314.34
	Add 1 % for water charges				3.14
	TOTAL				317.48
	Add 15% for contractor's profit and overheads				47.62
	Cost of 30.00 mtrs				365.10
	Cost of 1.00 metre				12.17
	Say				12.15

14.51 : Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :

14.51.1: 75 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metres				
	Area = 22/7x81.4 mmx30 m = 7.67 sqm				
	Materials-				
0826	Aluminium paint	litre	0.35	89.00	31.15
9999	Putty, sand paper etc.	L.S.	0.39	1.00	0.39
9999	Carriage	L.S.	2.08	1.00	2.08
	LABOUR				
0131	Painter	Day	0.28	141.60	39.65
0115	Coolie	Day	0.28	135.25	37.87
9999	Putty, sand paper brushes etc.	L.S.	4.16	1.00	4.16
9999	Sundries	L.S.	6.24	1.00	6.24
9999	Wire brushes for cleaning	L.S.	4.42	1.00	4.42
9999	Extra for delay	L.S.	26.91	1.00	26.91
	TOTAL				152.87
	Add for water charge @ 1 %				1.53
	TOTAL				154.40
	Add for contractor's profit and overheads @15%				23.16
	Cost of 30.00 m				177.56
	Cost of 1.00 m				5.92
	Say				5.90

14.51: Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :

14.51.2: 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metres				
	Area = 22/7x106.4 mmx30 m = 10.032 sqm				
	Materials-				
0826	Aluminium paint	litre	0.46	89.00	40.94
9999	Putty, sand paper etc.	L.S.	0.52	1.00	0.52
9999	Carriage	L.S.	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Putty, sand paper brushes etc.	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
9999	Wire brushes for cleaning	L.S.	5.33	1.00	5.33
9999	Extra for delay	L.S.	34.06	1.00	34.06
	TOTAL				196.64
	Add for water charge @ 1%				1.97
	TOTAL				198.61
	Add for contractor's profit and overheads @15%				29.79
	Cost of 30m				228.40
	Cost of 1.00 m				7.61
	Say				7.60

14.51: Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :

14.51.3: 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metres				
	Area = 22/7x157.2 mmx30 m = 14.82 sqm				
	Materials-				
0826	Aluminium paint	litre	0.68	89.00	60.52
9999	Putty, sand paper etc.	L.S.	0.65	1.00	0.65
9999	Carriage	L.S.	3.90	1.00	3.90
	LABOUR				
0131	Painter	Day	0.53	141.60	75.05
0115	Coolie	Day	0.53	135.25	71.68
9999	Putty, sand paper brushes etc.	L.S.	7.93	1.00	7.93
9999	Sundries	L.S.	11.96	1.00	11.96
9999	Wire brushes for cleaning	L.S.	7.15	1.00	7.15
9999	Extra for delay	L.S.	40.30	1.00	40.30
	TOTAL				279.14
	Add for water charge @ 1 %				2.79
	TOTAL				281.93
	Add for contractor's profit and overheads @15%				42.29
	Cost of 30.00 m				324.22
	Cost of 1.00 m				10.81
	Say				10.80

14.52 : Painting with oil type wood preservative of approved brand and manufacture

14.52.1: Old work (one or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIALS				
0859	Oil type wood preservative	litre	0.81	60.00	48.60
9999	Carriage of material	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.11	141.60	15.58
0115	Coolie	Day	0.11	135.25	14.88
9999	Brushes etc	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				85.04
	Add 1% for water charges				0.85
	TOTAL				85.89
	Add, 15 % for contractor's profit and overheads				12.88
	Cost of 10.00 sqm				98.77
	Cost of 1.00 sqm				9.88
	Say				9.90

14.53 : Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade

14.53.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10'sqm				
	MATERIALS				
0835	Plastic emulsion paint	litre	0.73	140.00	102.20
9999	Materials for filling in holes and cracks (putty etc)	L.S.	0.52	1.00	0.52
9999	Carriage of material	L.S.	5.33	1.00	5.33
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand paper etc	L.S.	8.06	1.00	8.06
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				222.54
	Add 1% for water charges				2.23
	TOTAL				224.77
	Add 15 % for contractor's profit and overheads				33.72
	Cost of 10.00 sqm				258.49
	Cost of 1.00 sqm				25.85
	Say				25.85

14.54 : Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :

14.54.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	Materials-				
0833	Enamel paint	litre	0.70	115.00	80.50
9999	Carriage of paint and materials	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69

Code	Description	Unit	Quantity	Rate	Amount
9999	Putty	L.S.	2.73	1.00	2.73
9999	Brushes sand paper etc.	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				196.81
	Add for water charge @ 1 %				1.97
	TOTAL				198.78
	Add for contractor's profit and overheads @15%				29.82
	Cost of 10.00 sqm				228.60
	Cost of 1.00 sqm				22.86
	Say				22.85

14.55 : Painting with aluminium paint of approved brand and manufacture to give an even shade

14.55.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIALS				
0826	Aluminium paint	litre	0.46	89.00	40.94
9999	Carriage of paint and material	L.S.	0.52	1.00	0.52
9999	Putty etc	L.S.	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand paper etc	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				157.25
	Add 1 % for water charges				1.57
	TOTAL				158.82
	Add 15% for contractor's profit and overheads				23.82
	Cost of 10.00 sqm				182.64
	Cost of 1.00 sqm				18.26
	Say				18.25

14.56 : Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :

14.56.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 sqm				
	MATERIALS				
0827	Acid proof paint	litre	0.70	93.00	65.10
9999	Carriage of paint	L.S.	0.52	1.00	0.52
9999	Putty etc	L.S.	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand paper etc	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				181.41
	Add 1 % for water charges				1.81
	TOTAL				183.22
	Add 15% for contractor's profit and overheads				27.48
	Cost of 10.00 sqm				210.70
	Cost of 1.00 sqm				21.07
	Say				21.05

14.57 : Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :

14.57.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIALS				
0828	Black anticorrosive bitumastic paint	litre	0.57	52.00	29.64
9999	Carriage	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Putty, brushes, sand paper etc	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				143.22
	Add 1% for water charges				1.43
	TOTAL				144.65
	Add 15% for contractor's profit and overheads				21.70
	Cost of 10.00 sqm				166.35
	Cost of 1.00 sqm				16.64
	Say				16.65

14.58 : French spirit polishing:

14.58.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 'sqm				
	Materials-				
1000	Spirit	litre	0.98	37.00	36.26
0999	Shellac	kilogram	0.13	192.00	24.96
9999	Carriage of materials	L.S.	0.91	1.00	0.91
9999	Turpentine oil sand paper cotton/woolen cloth putty etc.	L.S.	10.79	1.00	10.79
9999	Linseed oil	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	1.76	141.60	249.22
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				330.72
	Add for water charge @ 1 %				3.31
	TOTAL				334.03
	Add for contractor's profit and overheads @15%				50.10
	Cost of 10.00 sqm				384.13
	Cost of 1.00 sqm				38.41
	Say				38.40

14.59 : Polishing on wood work with ready made wax polish of approved brand and manufacture :

14.59.1: Old work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
0855	Ready made Wax polish	kilogram	0.25	150.00	37.50
9999	Carriage	L.S.	0.39	1.00	0.39
	LABOUR				
0131	Painter	Day	0.40	141.60	56.64
0115	Coolie	Day	0.40	135.25	54.10

Code	Description	Unit	Quantity	Rate	Amount
9999	Soap, brushes, cloth etc	L.S.	4.16	1.00	4.16
9999	Sundries	L.S.	4.42	1.00	4.42
	TOTAL				157.21
	Add 1% for water charges				1.57
	TOTAL				158.78
	Add 15% for contractor's profit and overheads				23.82
	Cost of 10.00 sqm				182.60
	Cost of 1.00 sqm				18.26
	Say				18.25

14.60 : Re-lettering with black Japan paint of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 100 letters of 15 cm height				
	MATERIALS				
0829	Paint (Black Japan)	litre	0.37	65.00	24.05
9999	Carriage	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	4.00	141.60	566.40
0115	Coolie	Day	1.00	135.25	135.25
9999	Painting brushes, turpentine, stencil etc	L.S.	7.15	1.00	7.15
9999	Sundires	L.S.	8.06	1.00	8.06
	TOTAL				741.43
	Add 1% for water charges				7.41
	TOTAL				748.84
	Add 15% for contractor's profit and overheads				112.33
	Cost of 100 letters of 15 cm height				861.17
	Cost of 1 letters of 1 cm height				0.57
	Say				0.55

14.61 Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	Materials-				
0829	Black Japan Paint	litre	0.70	65.00	45.50
9999	Carriage	L.S.	0.52	1.00	0.52
9999	Putty etc.	L.S.	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand paper etc.	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				161.81
	Add for water charge @ 1 %				1.62
	TOTAL				163.43
	Add 15% for contractor's profit and overheads				24.51
	Cost of 10.00 sqm				187.94
	Cost of 1.00 sqm				18.79
	Say				18.80

14.62 : Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin :

14.62.1: 32mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one no.				
	Materials-				
1314	C.P. brass chain with 32 mm dia rubber plug	each	1	21.00	21.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.00	8.06
	TOTAL				29.06
	Add for water charge @ 1%				0.29
	TOTAL				29.35
	Add for contractor's profit and overheads @ 15 %				4.40
	Cost of one no.				33.75
	Say				33.75

14.62 : Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin :

14.62.2 40 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one no.				
	Materials-				
1315	C.P. brass chain with 40 mm dia rubber plug	each	1	22.00	22.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.00	8.06
	TOTAL				30.06
	Add for water charge @ 1%				0.30
	TOTAL				30.36
	Add for contractor's profit and overheads @ 15%				4.55
	Cost of one no.				34.91
	Say				34.90

14.63 : Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete, as per manufacturer's specification.

14.63.1: One or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIALS				
0816	Oil bound washable distemper	kilogram	1	40.00	40.00
9999	Brushes, putty etc	L.S.	0.52	1.00	0.52
9999	Sundries including carriage of material	L.S.	10.76	1.00	10.76
	LABOUR				
0131	Painter	Day	0.22	141.60	31.15
0114	Beldar	Day	0.22	135.25	29.76
9999	Sundires	L.S.	7.15	1.00	7.15
	TOTAL				119.34
	Add 1 % for water charges				1.19
	TOTAL				120.53
	Add 15% for contractor's profit and overheads				18.08
	Cost of 10.00 sqm				138.61
	Cost of 1.00 sqm				13.86
	Say				13.85

14.64 Finishing walls with water proofing cement paint of required shade :

14.64.1 Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litrs/10 sqm complete including cost of Priming coat.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10'sqm				
	MATERIALS				
0851	Water proofing cement paint	kilogram	2.20	36.00	79.20
8508	Primer for cement paint	litre	0.80	52.00	41.60
9999	Carriage of material	L.S.	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.46	141.60	65.14
0115	Coolie	Day	0.23	135.25	31.11
0101	Bhisti	Day	0.05	138.45	6.92
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				240.74
	Add 1 % for water charges				2.41
	TOTAL				243.15
	Add 10% for contractor's profit and overheads				36.47
	Cost of 10.00 sqm				279.62
	Cost of 1.00 sqm				27.96
	Say				27.95

14.65 : Finishing walls with textured exterior paint of required shade :

14.65.1 : Old work (Two or more coats on existing cement paint surface applied @ 3.28ltr/10 sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10sqm				
	MATERIALS				
8507	Textured exterior paint	litre	3.28	183.00	600.24
9999	Carriage of material	L.S.	1.56	1.00	1.56
	LABOUR				
0131	Painter	Day	0.46	141.60	65.14
0115	Coolie	Day	0.23	135.25	31.11
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				713.26
	Add 1 % for water charges				7.13
	TOTAL				720.39
	Add 10% for contractor's profit and overheads				108.06
	Cost of 10.00 sqm				828.45
	Cost of 1.00 sqm				82.85
	Say				82.85

14.65 : Finishing walls with textured exterior paint of required shade :

14.65.2 : Old work (One or more coats) applied @ 1.82 ltr/10 sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	MATERIALS				
8507	Textured exterior paint	litre	1.82	183.00	333.06
9999	Carriage of material	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.33	141.60	46.73
0115	Coolie	Day	0.17	135.25	22.99
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.06	1.00	8.06

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				418.51
	Add 1% for water charges				4.19
	TOTAL				422.70
	Add 15 % for contractor's profit and overheads				63.40
	Cost'of 10.00 sqm				486.10
	Cost of 1.00 sqm				48.61
	Say				48.60

14.66 : Finishing walls with Acrylic Smooth exterior paint of required shade :
14.66.1: Old work (Two or more coat applied @ 1.67 ltr/10 sqm) on existing cement paint surface).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8505	Acrylic exterior paint	litre	1.67	123.00	205.41
9999	Carriage of material	L.S.	0.91	1.00	0.91
	LABOUR				
0131	Painter	Day	0.46	141.60	65.14
0 115	Coolie	Day	0.23	135.25	31.11
9999	Brushes, sand paper etc	L.S.	4.81	1.00	4.81
9999	Sundries	L.S.	5.33	1.00	5.33
	TOTAL				312.71
	Add 1% for water charges				3.13
	TOTAL				315.84
	Add 15% for contractor's profit and overheads				47.38
	Cost of 10.00 sqm				363.22
	Cost of 1.00 sqm				36.32
	Say				36.30

14.66 : Finishing walls with Acrylic Smooth exterior paint of required shade :
14.66.2: Old work (One or more coat applied @ 0.90 ltr/10 sqm).

Code	Description	Unit	Quantity	Rate	Amount
	MATERIALS				
8505	Acrylic exterior paint	litre	0.90	123.00	110.70
9999	Carriage of material	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.33	141.60	46.73
0115	Coolie	Day	0.17	135.25	22.99
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				196.15
	Add 1% for water charges				1.96
	TOTAL				198.11
	Add 15% for contractor's profit and overheads				29.72
	Cost of 10.00 sqm				227.83
	Cost of 1.00 sqm				22.78
	Say				22.80

14.67 Finishing walls with Premium Acrylic Smooth exterior paint of required shade

14.67.1 Old work (Two or more coats applied @ 1.43 ltr/10sqm) over existing cement paint surface.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIALS				
8506	Premium Acrylic exterior paint	litre	1.43	202.00	288.86
9999	Carriage of material	L.S.	1.04	1.00	1.04
	LABOUR				
0131	Painter	Day	0.46	141.60	65.14
0115	Coolie	Day	0.23	135.25	31.11
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				401.36
	Add 1 % for water charges				4.01
	TOTAL				405.37
	Add 15% for contractor's profit and overheads				60.81
	Cost of 10.00 sqm				466.18
	Cost of 1.00 sqm				46.62
	Say				46.60

14.67 : Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade

14.67.2: Old work (one or more coats applied @ 0.83 ltr/10 sqm).

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				
8506	Premium Acrylic exterior paint	litre	0.83	202.00	167.66
9999	Carriage of material	L.S.	0.91	1.00	0.91
	LABOUR				
0131	Painter	Day	0.33	141.60	46.73
0115	Coolie	Day	0.17	135.25	22.99
9999	Brushes, sand paper etc	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				253.50
	Add 1 % for water charges				2.54
	TOTAL				256.04
	Add 15% for contractor's profit and overheads				38.41
	Cost of 10.00 sqm				294.45
	Cost of 1.00 sqm				29.45
	Say				29.45

14.68 Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :

14.68.1 100 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 metre				
	Area=22/7 x 106.4mm x30m =10.032sqm				
	MATERIALS				
0828	Anticorrosive bituminous paint (black)	litre	0.57	52.00	29.64
9999	Carriage	L.S.	0.52	1.00	0.52
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69

Code	Description	Unit	Quantity	Rate	Amount
9999	Putty, sand paper etc	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	8.06	1.00	8.06
9999	Wire brushes for cleaning	L.S.	5.33	1.00	5.33
9999	Extra for delays	L.S.	34.06	1.00	34.06
	TOTAL				182.61
	Add 1% for water charges				1.83
	TOTAL				184.44
	Add 15% for contractor's profit and overheads				27.67
	Cost of 30.00 mtrs				212.11
	Cost of 1.00 metre				7.07
	Say				7.05

14.68: Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :

14.68.2: 150 mm diameter pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 mtrs				
	Area=22/7 x106.4mm x30m =10.032sqm				
	MATERIALS				
0828	Anticorrosive bituminous paint (black)	litre	0.85	52.00	44.20
9999	Carriage	L.S.	0.65	1.00	0.65
	LABOUR				
0131	Painter	Day	0.53	141.60	75.05
0115	Coolie	Day	0.53	135.25	71.68
9999	Putty, sand paper etc	L.S.	8.06	1.00	8.06
9999	Sundries	L.S.	11.96	1.00	11.96
9999	Wire brushes for cleaning	L.S.	7.15	1.00	7.15
9999	Extra for delays	L.S.	40.30	1.00	40.30
	TOTAL				259.05
	Add 1 % for water charges				2.59
	TOTAL				261.64
	Add 15% for contractor's profit and overheads				39.25
	Cost of 30.00 mtrs				300.89
	Cost of 1.00 metre				10.03
	Say				10.05

14.69 : Varnishing with varnish of approved brand and manufacture:

14.69.1: One or more coats with copal varnish.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIALS				
0857	Superior copal varnish	litre	0.70	100.00	70.00
9999	Carriage	L.S.	0.52	1.00	0.52
9999	Repair to the surface	L.S.	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				180.98
	Add 1 % for water charges				1.81
	Add 15% ofor contractor's profit and overheads				182.79
	TOTAL				27.42
	Cost of 10.00 sqm				210.21
	Cost of 1.00 sqm				21.02
	Say				21.00

14.69 : Varnishing with varnish of approved brand and manufacture:
14.69.2 : One or more coats with spar varnish.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 sqm				
	MATERIALS				
0858	Superior spar varnish	litre	0.75	105.00	78.75
9999	Carriage	L.S.	0.52	1.00	0.52
9999	Repair etc	L.S.	2.73	1.00	2.73
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0114	Coolie	Day	0.36	135.25	48.69
9999	Brushes, sand paper etc	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	4.16	1.00	4.16
	TOTAL				188.56
	Add 1 % for water charges				1.89
	TOTAL				190.45
	Add 15% for contractor's profit and overheads				28.57
	Cost of 10.00 sqm				219.02
	Cost of 1.00 sqm				21.90
	Say				21.90

14.70 Melamine polishing on wood work (one or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10sqm				
	MATERIALS				
7241	Melamine polish	litre	0.65	228.00	148.20
0006	Hire charges of Spraying machine including electric charges	Day	0.78	173.00	134.94
9999	Carriage charge of Machine & Marerial	L.S.	4.42	1.00	4.42
	LABOUR				
0131	Painter	Day	0.35	141.60	49.56
0115	Beldar	Day	0.35	135.25	47.34
9999	Sundries	L.S.	4.42	1.00	4.42
	TOTAL				388.88
	Add 1 % for water charges				3.89
	TOTAL				392.77
	Add 15% for contractor's profit and overheads				58.92
	Cost of 10.00 sqm				451.69
	Cost of 1.00 sqm				45.17
	Say				45.15

14.71 Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10'sqm				
	MATERIALS				
0856	Flatting varnish	litre	0.70	49.00	34.30
9999	Glue, putty etc	L.S.	2.73	1.00	2.73
9999	Carriage	L.S.	1.82	1.00	1.82
9999	Painting brushes, turpentine, stencil etc	L.S.	24.18	1.00	24.18
	LABOUR				
0131	Painter	Day	0.36	141.60	50.98
0115	Coolie	Day	0.36	135.25	48.69

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				162.70
	Add 1 % for water charges				1.63
	TOTAL				164.33
	Add 15% for contractor's profit and overheads				24.65
	Cost of 10.00 sqm				188.98
	Cost of 1.00 sqm				18.90
	Say				18.90

14.72 : Providing and fixing double scaffolding system (cup lock type) on the exterior side, upto seven story height made with 40mm dia. M.S. tube 1.5 m centre to centre horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge. The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding. (To be used for maintenance work judicially, necessary deduction for scaffolding in the existing item to be done.)

Code	Description	Unit	Quantity	Rate	Amount
	DETAILS OF COST FOR AREA 22.5MX9.0M = 202.50sqm.				
7397	Base jack 7x2=14.00nos	Each	14.00	165.00	2,310.00
	40mm dia M.S. Tube				
	Vertical standards 2.5mts length=7x2x9x2.5 =315.00mts				
	Bracing ledger 1.50 m length=7x2x9x2.50 =513.00 mts				
	size support 6.00 m length = 3x2x6.00 =36.00 mts				
	Horizontal support 3.00 m length =18x3x3.00 m = 162.00 mts				
	Total = 1026.00 mts				
4009	M.S.Tube 1026 m x 3.67 kg/m =3765.42 kg.	Kg	3,765.42	38.00	143,085.96
7387	Spigot for standard joining = 7x2x9=126 nos. 126 nos.x 0.40 m length =50.40 m @ 2.46 kg/m =123.98 kg	Kg	123.98	40.00	4,959.20
1034	Nuts and bolts for spigot = 2x7x2x9 = 252 nos. @ 0.15 kg each = 37.80 kg				
	Say 0.378 Q	Qtls	0.378	4,300.00	1,625.40
7346	Clamps/couplers for clamps for fixing of M.S. Tube with scaffolding = (2x3x2+2x18x3) =120 nos.	Each	120.00	45.00	5,400.00
7398	Challies 3 nos. x 18 line = 54 nos.				
	Two level plate challies = 2x18 line = 36 nos.				
	Total = 90 nos.	Each	90.00	715.00	64,350.00
7399	Cup locks for :-				
	Vertical standards 5x7x2x9 = 630.00 nos.				
	2x18x19 = 694.00 nos.				
	Total =1314 nos.				
	Cup locks	Each	1,314	66.00	86.724.00
					(A) 308,454.56
	Add 10% for maintenance				30,845.46
					339,300.02
	Less 25% salvage value on (A)				(-)77,113.64
					262,186.38
	Considering that scaffolding shall be unserviceable after using 40 times				
	Cost of using once				6,554.66

Code	Description	Unit	Quantity	Rate	Amount
2205	Carriage cost of material :-				
	40 mm dia. M.S. pipe = 3,765.42 kg				
	25 mm box spigot = 123.98 kg				
	Nuts and bolts = 37.80 kg				
	Clamps = 120 nos. @ 1.00 kg.each = 120.00 kg				
	Challies = 90 nos. @ 15.00 kg. each = 1,350.00 kg				
	Cup locks = 1314 nos. @ 0.50 kg each = 657.00 kg				
	Total = 6054.20 kg. say 6.054 M.T.	M.T.	6.054	47.29	286.29
	LABOUR :-				
0116	Fitter Grade I	Each	15.50	151.50	2,348.25
0114	Beldar	Each	31.00	135.25	4,192.75
9999	Sundries	L.S.	1,035.00	1.00	1,035.00
					14,416.95
	Add 1 % for water charges		144.17		
					14,561.12
	Add 15% for contractor's profit and overheads				2,184.17
	Cost of 202.50 sqm.				16,745.29
	Cost per sqm.				82.69
	Say				82.70

SUB HEAD : 15.0

DISMANTLING AND DEMOLISHING

15.1 Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineer in charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.44	135.25	59.51
0115	Coolie	Day	0.37	135.25	50.04
9999	Sundries	L.S	1.04	1.00	1.04
	TOTAL				110.59
	Add 1% for water charges				1.11
	TOTAL.				111.70
	Add 15% for contractor's profit and overheads				16.76
	Cost of 1.00 cum				128.46
	Say				128.45

15.2 Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer in charge.

15.2.1 1:3:6 or richer mix

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	1.59	135.25	215.05
0115	Coolie	Day	0.72	135.25	97.38
9999	Sundries	L.S	4.81	1.00	4.81
	TOTAL				317.24
	Add 1% for water charges				3.17
	TOTAL.				320.41
	Add 15% for contractor's profit and overheads				48.06
	Cost of 1.00 cum				368.47
	Say				368.45

15.2 Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer in charge.

15.2.2 1:4:8 or leaner mix

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.88	135.25	119.02
0115	Coolie	Day	0.55	135.25	74.39
9999	Sundries	L.S	1.95	1.00	1.95
	TOTAL				195.36
	Add 1% for water charges				1.95
	TOTAL.				197.31
	Add 15% for contractor's profit and overheads				29.60
	Cost of 1.00 cum				226.91
	Say				226.90

15.3 Demolishing R.C.C. work, including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	2.65	135.25	358.41
0115	Coolie	Day	0.72	135.25	97.38
9999	Sundries	L.S	7.02	1.00	7.02
	TOTAL				4.62.81
	Add 1 % for water charges				4.63
	TOTAL.				467.44
	Add 15% for contractor's profit and overheads				70.12
	Cost of 1.00 cum				537.56
	Say				537.55

15.4 Demolishing R.B. work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	2.12	135.25	286.73
0115	Coolie	Day	0.90	135.25	121.72
9999	Sundries	L.S	4.68	1.00	4.68
	TOTAL				413.13
	Add 1% for water charges				4.13
	TOTAL.				417.26
	Add 15% for contractor's profit and overheads				62.59
	Cost of 1.00 cum				479.85
	Say				479.85

15.5 Extra for cutting reinforcement bars manually / by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer - in -charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 sqm				
	R.C.C. or R.B. workReinforced area considering 1% reinforcement = 0.01 sqm				
	LABOUR				
	For cutting 0.01 sqm reinforcement				
0103	Blacksmith 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				151.81
	Add 1% for water charges				1.52
	TOTAL				153.33
	Add 15% for contractor's profit and overheads				23.00
	Cost of 1.00 sqm of sectional area of R.C.C or R.B. work				176.33
	Say				176.35

15.6 Extra for scrapping, cleaning and straightening reinforcement from R.C.C. or R.B. work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 Nos 6 metres long 16 mm dia bars @ 1.58 kg/metre				
	Total weight = 94.80 kg = 0.948 quintal				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.5	135.25	67.62
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				116.41
	Add 1 % for water charges				1.16
	TOTAL				117.57
	Add 15% for contractor's profit and overheads				17.64
	Cost of 94.80 Kg.				135.21
	Cost of 1 Kg.				1.43
	Say				1.45

15.7 Demolishing brick work, manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable materialwithin 50 metres lead as per direction of Engineer-in-charge.

15.7.1 In mud mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.30	135.25	40.57
0115	Coolie	Day	0.37	135.25	50.04
9999	Sundries	L.S	1.04	1.00	1.04
	TOTAL				91.65
	Add 1 % for water charges				0.92
	TOTAL				92.57
	Add 15% for contractor's profit and overheads				13.89
	Cost of 1.00 cum				106.46
	Say				106.45

15.7. Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable materialwithin 50 metres lead as per direction of Engineer-in-charge.

15.7.2 In lime mortar with old mughal bricks.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	1.24	135.25	167.71
0115	Coolie	Day	0.46	135.25	62.22
9999	Sundries	L.S	1.04	1.00	1.04
	TOTAL				230.97
	Add 1% for water charges				2.31
	TOTAL				233.28
	Add 15% for contractor's profit and overheads				34.99
	Cost of 1.00 cum				268.27
	Say				268.25

15.7 Demolishing brick work manually/by machanical means including stacking of serviceable material and disposal of unserviceable materialwithin 50 metres lead as per direction of Engineer-in-charge.

15.7.3 In lime mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.44	135.25	59.51
0115	Coolie	Day	0.37	135.25	50.04
9999	Sundries	L.S	1.04	1.00	1.04
	TOTAL				110.59
	Add 1 % for water charges				1.11
	TOTAL				111.70
	Add 15% for contractor's profit and overheads				16.76
	Cost of 1.00 cum				128.46
	Say				128.45

15.7 Demolishing brick work manually/by machanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.

15.7.4 In Cement mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	1.06	135.25	143.36
0115	Coolie	Day	0.90	135.25	121.72
9999	Sundries	L.S	2.47	1.00	2.47
	TOTAL				267.55
	Add 1% for water charges				2.68
	TOTAL-				270.23
	Add 15% for contractor's profit and overheads				40.53
	Cost of 1.00 cum				310.76
	Say				310.75

15.8 Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured):

15.8.1 From brick work in mud mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1000 Nos.				
	LABOUR				
0114	Beldar	Day	2.40	135.25	324.60
0115	Coolie	Day	1.60	135.25	216.40
0124	Mason 2nd class	Day	0.40	141.60	56.64
9999	Sundries	L.S	1.82	1.00	1.82
	TOTAL				599.46
	Add 1% for water charges				5.99
	TOTAL				605.45
	Add 15% for contractor's profit and overheads				90.82
	Cost of 1000 Nos				696.27
	Say				696.25

15.8 Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured):

15.8.2 From brick work in lime mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1000 Nos.				
	LABOUR				
0114	Beldar	Day	2.80	135.25	378.70
0115	Coolie	Day	1.40	135.25	
0124	Mason 2nd class	Day	0.80	141.60	113.28
9999	Sundries	L.S	8.97	1.00	8.97
	TOTAL				690.30
	Add 1 % for water charges				6.90
	TOTAL				697.20
	Add 15% for contractor's profit and overheads				104.58
	Cost of 1000 Nos				801.78
	Say				801.80

15.8 Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured):

15.8.3 From brick work in cement mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1000 Nos.				
	LABOUR				
0114	Beldar	Day	3.50	135.25	473.38
0115	Coolie	Day	1.50	135.25	202.88
0124	Mason 2nd class	Day	1.24	141.60	175.58
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				859.90
	Add 1% for water charges				8.60
	TOTAL				868.50
	Add 15% for contractor's profit and overheads				130.28
	Cost of 1000 Nos				998.78
	Say				998.80

15.9 Demolishing stone rubble masonry manually/by machanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per directionof Engineer-in-charge:

15.9.1 In lime mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1.00 cum				
	LABOUR				
0114	Beldar	Day	0.61	135.25	82.50
0115	Coolie	Day	0.49	135.25	66.27
9999	Sundries	L.S	1.95	1.00	1.95
	TOTAL				150.72
	Add 1% for water charges				1.51
	TOTAL				152.23
	Add 15% for contractor's profit and overheads				22.83
	Cost of 1.00 cum				175.06
	Say				175.05

15.9 Demolishing stone rubble masonry manually/by machanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per directionof Engineer-in-charge:

15.9.2 In cement mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1.00 cum				
	LABOUR				
0114	Beldar	Day	1.30	135.25	175.82
0115	Coolie	Day	1.04	135.25	140.66
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				319.21
	Add 1% for water charges				3.19
	TOTAL				322.40
	Add 15% for contractor's profit and overheads				48.36
	Cost of 1.00 cum				370.76
	Say				370.75

15.10 Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/by machanical means including stacking of serviceable and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge:

15.10.1 In lime mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.78	135.25	105.50
0115	Coolie	Day	0.61	135.25	82.50
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				190.73
	Add 1% for water charges				1.91
	TOTAL				192.64
	Add 15% for contractor's profit and overheads				28.90
	Cost of 1.00 cum.				221.54
	Say				221.55

15.10 Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/by machanical means incluaingstacking of serviceable and disposal of unserviceable material within 50* metres lead as per direction of Engineer-in-charge:

15.10.2 In cement mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	1.55	135.25	209.64
0115	Coolie	Day	1.19	135.25	160.95
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				373.32
	Add 1% for water charges				3.73
	TOTAL				377.05
	Add 15% for contractor's profit and overheads				56.56
	Cost of 1.00 cum.				433.61
	Say				433.60

15.11 Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned material will be measured):

15.11.1 In lime mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0124	Mason 2nd class	Day	0.05	141.60	7.08
0114	Beldar	Day	0.20	135.25	27.05
0115	Coolie	Day	0.20	135.25	27.05
9999	Sundries	L.S	0.52	1.00	0.52
	TOTAL				61.70
	Add 1 % for water charges				0.62
	TOTAL				62.32
	Add 15% for contractor's profit and overheads				9.35
	Cost of 1.00 cum				71.67
	Say				71.65

15.11 Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned material will be measured):

15.11.2 In cement mortar

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0124	Mason 2nd class	Day	0.05	141.60	7.08
0114	Beldar	Day	0.40	135.25	54.10
0115	Coolie	Day	0.20	135.25	27.05
9999	Sundries	L.S	0.91	1.00	0.91
	TOTAL				89.14
	Add 1 % for water charges				0.89
	TOTAL				90.03
	Add 15% for contractor's profit and overheads				13.50
	Cost of 1.00 cum				103.53
	Say				103.55

15.12 Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :

15.12.1 Of area 3 sq. metres and below

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for each				
	LABOUR				
0124	Mason 2nd class	Day	0.10	141.60	14.16
0114	Beldar	Day	0.18	135.25	24.34
0103	Blacksmith 2nd class	Day	0.05	135.25	7.08
9999	Sundries	L.S	1.43	1.00	1.43
	TOTAL				47.01
	Add 1% for water charges				0.47
	TOTAL				47.48
	Add 15% for contractor's profit and overheads				7.12
	Cost of each				54.60
	Say				54.60

15.12 Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead

15.12.2 Of area beyond 3.00 sqm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for each				
0124	Mason (brick layer) 2nd class	Day	0.13	141.60	18.41
0114	Beldar	Day	0.25	135.25	33.81
0103	Blacksmith 2nd class	Day	0.07	135.25	9.91
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				64.86
	Add 1% for water charges				0.65
	TOTAL				65.51
	Add 15% for contractor's profit and overheads				9.83
	Cost of each				75.34
	Say				75.35

15.13 Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:

15.13.1 Of area 3 sq. metre and below

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for each				
	LABOUR				
0112	Carpenter 2nd class	Day	0.05	141.60	7.08
0114	Beldar	Day	0.08	135.25	10.82
9999	Sundries	L.S	0.52	1.00	0.52
	TOTAL				18.42
	Add 1 % for water charges				0.18
	TOTAL				18.60
	Add15% for contractor's profit and overheads				2.79
	Cost of each				21.39
	Say				21.40

15.13 Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:

15.13.2 Of area beyond 3.00 sqm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for each				
	LABOUR				
0112	Carpenter 2nd class	Day	0.07	141.60	9.91
0114	Beldar	Day	0.10	135.25	13.52
9999	Sundries	L.S	0.91	1.00	0.91
	TOTAL				24.34
	Add 1 % for water charges				0.24
	TOTAL				24.58
	Add15% for contractor's profit and overheads				3.69
	Cost of each				28.27
	Say				28.25

15.14 Dismantling wood work in frames, trusses, purlins and rafters upto 10 metres span and 5 metres height including stacking the material within 50 metres lead:

15.14.1 Of sectional area 40 square centimetres and above.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0112	Carpenter 2nd class	Day	2.00	141.60	283.20
0114	Beldar	Day	2.00	135.25	270.50
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				567.09
	Add 1% for water charges				5.67
	TOTAL				572.76
	Add 15% for contractor's profit and overhead				85.91
	Cost of 1.00 cum				658.67
	Say				658.65

15.14 Dismantling wood work in frames, trusses, purlins and rafters upto 10 metres span and 5 metres height including stacking the material within 50 metres lead:

15.14.2 Of sectional area below 40 square centimetres.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 m.				
	LABOUR				
0112	Carpenter 2nd class	Day	0.08	141.60	11.33
0114	Beldar	Day	0.08	135.25	10.82
9999	Sundries	L.S	0.52	1.00	0.52
	TOTAL				22.67
	Add 1% for water charges				0.23
	TOTAL				22.90
	Add 15% for contractor's profit and overhead				3.44
	Cost of 10.00 metre				26.34
	Cost of 1.00 m.				2.63
	Say				2.65

15.15 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional span of one metre or part thereof beyond 10 metres:

15.15.1 Of sectional area 40 square centimetres and above.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum for every additional span of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				82.28
	Add 1 % for water charges				0.82
	TOTAL				83.10
	Add 15% for contractor's profit and overheads				12.46
	Cost of 1.00 cum / m span				95.56
	Say				95.55

15.15 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional span of one metre or partlhereof beyond 10 metres :

15.15.2 Of sectional area below 40 square centimetres.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 metre for every additional span of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.006	141.60	0.85
0114	Beldar	Day	0.008	135.25	1.08
9999	Sundries	L.S	0.39	1.00	0.39
	TOTAL				2.32
	Add 1% for water charges				0.02
	TOTAL				2.34
	Add 15% for contractor's profit and overheads				0.35
	Cost of 10.00 metre / m span				2.69
	Cost of 1.00 metre/ m span				0.27
	say				0.25

15.16 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional height of one metre or part thereof beyond 5 metres:

15.16.1 Of sectional area 40 square centimetres and above.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum for every additional height of 1 metre				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				116.41
	Add 1 % for water charges				1.16
	TOTOL				117.57
	Ada 15% for contractor's profit and overheads				17.64
	Cost of 1.00 cum / m height				135.21
	Say				135.20

15.16 Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional height of one metre, or part thereof beyond 5 metres:

15.16.2 Of sectional area below 40 square centimetres.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 metre for every additional height of 1 metre				
0103	LABOURBlacksmith 2nd class	Day	0.01	141.60	1.42
0114	Beldar	Day	0.02	135.25	2.70
9999	Sundries	L.S	0.39	1.00	0.39
	TOTAL				4.51
	Add 1% for water charges				0.05
	TOTOL				4.56
	Ada 15% for contractor's profit and overheads				0.68
	Cost of 10.00 metre/ m height				5.24
	Cost of 1.00 metre/m height				0.52
	Say				0.50

15.17 Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:

15.17.1 R.S. Joists

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.05	141.60	7.08
0100	Bandhani	Day	0.10	138.45	13.84
0114	Beldar	Day	0.15	135.25	20.29
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				43.94
	Add 1% for water charges				0.44
	TOTAL				44.38
	Add 15% for contractor's profit and overheads				6.66
	Cost of 1.00 quintal				51.04
	Cost of 1.00 kg				0.51
	Say				0.50

15.17 Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:

15.17.2 Channels, angles, tees and flats

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.05	141.60	7.08
0100	Bandhani	Day	0.05	138.45	6.92
0114	Beldar	Day	0.10	135.25	13.52
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				30.25
	Add 1 % for water charges				0.30
	TOTAL				30.55
	Add 15% for contractor's profit and overheads				4.58
	Cost of 1.00 quintal				35.13
	Cost of 1.00 kg				0.35
	Say				0.35

15.18 Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal				
	LABOUR				
0103	Blacksmith 2nd class	Day	0.15	141.60	21.24
0100	Bandhani	Day	0.10	138.45	13.84
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S	4.16	1.00	4.16
	TOTAL				73.05
	Add 1 % for water charges				0.73
	TOTAL				73.78
	Add 15% for contractor's profit and overheads				11.07
	Cost of 1.00 quintal				84.85
	Cost of 1.00 kg				0.85
	Say				0.85

15.19: Dismantling steel work manually/by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal				
	LABOUR				
0100	Bandhani	Day	0.10	138.45	13.84
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				50.38
	Add 1% for water charges				0.50
	TOTAL				50.88
	Add 15% for contractor's profit and overheads				7.63
	Cost of 1.00 quintal				58.51
	Cost of 1.00 kg				0.59
	Say				0.60

15.20: Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal for every additional span of 1 metre beyond 10 metre				
	LABOUR				
0100	Bandhani	Day	0.02	138.45	2.77
0114	Beldar	Day	0.06	135.25	8.12
9999	Sundries	L.S	0.39	1.00	0.39
	TOTAL				11.28
	Add 1 % for water charges				0.11
	TOTAL				11.39
	Add 15% for contractor's profit and overheads				1.71
	Cost of 1.00 quintal / m span				13.10
	Cost of 1.00 kg /m span				0.13
	Say				0.15

15.21: Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional height of one metre or part thereof beyond 5 metres.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal for every additional height of 1 metre beyond 5 metre				
	LABOUR				
0100	Bandhani	Day	0.02	138.45	2.77
0114	Beldar	Day	0.06	135.25	8.12
9999	Sundries	L.S	0.39	1.00	0.39
	TOTAL				11.28
	Add 1% for water charges				0.11
	TOTAL				11.39
	Add 15% for contractor's profit and overheads				1.71
	Cost of 1.00 quintal / m height				13.10
	Cost of 1.00 kg /m height				0.13
	Say				0.15

15.22: Extra for marking of structural steel work required to be re-erected.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal				
	LABOUR				
0130	Mistry	Day	0.20	151.50	30.30
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				57.35
	Add 1% for water charges				0.57
	TOTAL				57.92
	Add 15% for contractor's profit and overheads				8.69
	Cost of 1.00 quintal				66.61
	Cost of 1.00 kg				0.67
	Say				0.65

15.23 : Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metre lead.

15.23.1: For thickness of tiles above 10 mm and upto 25 mm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason 2nd class	Day	0.30	141.60	42.48
0114	Beldar	Day	0.12	135.25	16-23
0115	Coolie	Day	0.24	135.25	32.46
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				93.90
	Add 1 % for water charges				0.94
	TOTAL				94.84
	Add 15% for contractor's profit and overheads				14.23
	Cost of 10.00 sqm				109.07
	Cost of 1.00 sqm				10.91
	Say				10.90

15.23: Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metre lead.

15.23.2: For thickness of tiles above 25 mm and upto 40 mm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason (brick layer) 2nd class	Day	0.59	141.60	83.54
0114	Beldar	Day	0.18	135.25	24.34
0115	Coolie	Day	0.24	135.25	32.46
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				143.07
	Add 1 % for water charges				1.43
	TOTAL				144.50
	Add 15% for contractor's profit and overheads				21.68
	Cost of 10.00 sqm				166.18
	Cost of 1.00 sqm				16.62
	Say				16.60

15.24 : Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolie	Day	1.00	135.25	135.25
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				171.79
	Add 1 % for water charges				1.72
	TOTAL				173.51
	Add 15% for contractor's profit and overheads				26.03
	Cost of 1.00 cum				199.54
	Say				199.55

15.25: Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm.				
	LABOUR				
0114	Beldar	Day	1.77	135.25	239.39
0115	Coolie	Day	0.75	135.25	101.44
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				348.89
	Add 1 % for water charges				3.49
	TOTAL				352.38
	Add 15% for contractor's profit and overheads				52.86
	Cost of 10.00 sqm.				405.24
	Cost of 1.00 sqm				40.52
	Say				40.50

15.26 : Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason 2nd class	Day	0.54	141.60	76.46
0114	Beldar	Day	0.16	135.25	21.64
0115	Coolie	Day	0.24	135.25	32.46
9999	Sundries	L.S	2.47	1.00	2.47
	TOTAL				133.03
	Add 1% for water charges				1.33
	TOTAL				134.36
	Add15% for contractor's profit and overheads				20.15
	Cost of 10.00 sqm				154.51
	Cost of 1.00 sqm				15.45
	Say				15.45

15.27: Demolishing mud phaska in terracing and disposal ofmaterial within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolie	Day	0.62	135.25	83.86
9999	Sundries	L.S	1.04	1.00	1.04
	TOTAL				118.71
	Add 1 % for water charges				1.19
	TOTAL				119.90
	Add 15% for contractor's profit and overheads				17.98
	Cost of 1.00 cum				137.88
	Say				137.90

15.28 : Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:

15.28.1 : G.S. Sheet

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	1.00	135.25	135.25
9999	Sundries	L.S	6.76	1.00	6.76
	TOTAL				212.81
	Add 1 % for water charges				2.13
	TOTAL				214.94
	Add 15% for contractor's profit and overheads				32.24
	Cost of 10.00 sqm				247.18
	Cost of 1.00 sqm				24.72
	Say				24.70

15.28 : Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:

15.28.2: Asbestos Sheet

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				101.27
	Add 1 % for water charges				1.01
	TOTAL				102.28
	Add 15% for contractor's profit and overheads				15.34
	Cost of 10.00 sqm				117.62
	Cost of 1.00 sqm				11.76
	Say				11.75

15.29 : Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately) including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 cum				
	LABOUR				
0114	Beldar	Day	1.77	135.25	239.39
0115	Coolie	Day	0.75	135.25	101.44
9999	Sundries	L.S.	8.06	1.00	8 06
	TOTAL				
	Add 1 % for water charges				348.89
	TOTAL				3.49
	Add 15% for contractor's profit and overheads				352.38
					52.86
	Cost of 1 cum				405.24
	Say				405.25

15.30 : Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	Day	1.19	135.25	160.95
0115	Coolie	Day	1.21	135.25	163.65
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				332.66
	Add 1 % for water charges				3.33
	TOTAL				335.99
	Add 15% for contractor's profit and overheads				50.40
	Cost of 10.00 sqm				386.39
	Cost of 1.00 sqm				38.64
	Say				38.65

15.31: Dismantling tiled roofing with battens boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	Day	1.73	135.25	233.98
0115	Coolie	Day	0.25	135.25	33.81
9999	Sundries	L.S	8.06	1.00	8.06
	TOTAL				275.85
	Add 1 % for water charges				2.76
	TOTAL				278.61
	Add 15% for contractor's profit and overheads				41.79
	Cost of 10.00 sqm				320.40
	Cost of 1.00 sqm				32.04
	Say				32.05

15.32 : Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	Day	0.54	135.25	73.04
9999	Sundries	L.S	3.64	1.00	3.64
	TOTAL				76.68
	Add 1 % for water charges				0.77
	TOTAL				77.45
	Add 15% for contractor's profit and overheads				11.62
	Cost of 10.00 sqm				89.07
	Cost of 1.00 sqm				8.91
	Say				8.90

15.33: Dismantling wooden bailies in posts and struts including stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 50 metre				
	LABOUR				
0114	Beldar	Day	0.50	135.25	67.62
0115	Coolie	Day	0.50	135.25	67.62
9999	Sundries	L.S	0.52	1.00	0.52
	TOTAL				135.76
	Add 1 % for water charges				1.36
	TOTAL				137.12
	Add 15% for contractor's profit and overheads				20.57
	Cost of 50 m.				157.69
	Cost of 1.00 m				3.15
	Say				3.15

15.34 : Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:

15.34.1: 'T' or 'L' iron or pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for each				
	LABOUR				
0114	Beldar	Day	0.107	135.25	14.47
0115	Coolie	Day	0.067	135.25	9.06
9999	Excavation, transporting and stacking the posts to the required place within 50 metre lead, refilling the pit and dressing the same	L.S	0.26	1.00	0.26
9999	Extra for lifting of R.C.C. posts being heavier than L iron and cleaning the posts of stacking concrete	L.S	13.39	1.00	13.39
9999	Sundries	L.S	1.43	1.00	1.43
	TOTAL				38.61
	Add 1% for water charges				0.39
	TOTAL-				39.00
	Add 15 % for contractor's profit and overheads				5.85
	Cost of each				44.85
	Say				44.85

15.34: Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:

15.34.2: R.C.C

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for each				
	LABOUR				
0114	Beldar	Day	0.097	135.25	13.12
0115	Coolie	Day	0.06	135.25	8.12
9999	Sundries	L.S	0.26	1.00	0.26
9999	Excavation, transporting and stacking the posts to the required place within 50 metres lead, refilling the pit and dressing the same	L.S	13.39	1.00	13.39
9999	Extra for lifting of R.C.C. posts being heavier than L iron and cleaning the posts of stacking concrete	L.S	8.06	1.00	8.06
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				45.68
	Add 1 % for water charges				0.46
	TOTAL				46.14
	Add 15% for contractor's profit and overheads				6.92
	Cost of each				53.06
	Say				53.05

15.35 : Cutting bailies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1ballie (post)				
9999	Cutting	L.S	2.73	1.00	2.73
9999	Transporting and stacking	L.S	1.43	1.00	1.43
	TOTAL				4.16
	Add 1 % for water charges				0.04
	TOTAL.				4.20
	Add 15% for contractor's profit and overheads				0.63
	Cost of each				4.83
	Say				4.85

15.36 : Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 quintal				
	LABOUR				
0114	Beldar	Day	3.50	135.25	473.38
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				478.71
	Add 1 % for water charges				4.79
	TOTAL				483.50
	Add 15% for contractor's profit and overheads				72.53
	Cost of 1quintal				556 03
	Cost of 1.00 kg				5.56
	Say				5.55

15.37 : Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason 2nd class	Day	0.10	1,41.60	14.16
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolie	Day	0.25	135.25	33.81
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				84.51
	Add 1 % for water charges				0.85
	TOTAL				85.36
	Add 15% for contractor's profit and overheads				12.80
	Cost of 10.00 sqm				98.16
	Cost of 1.00 sqm				9.82
	Say				9.80

15.38 : Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.10	141.60	14.16
0114	Beldar	Day	0.40	135.25	54.10
0115	Coolie	Day	0.20	135.25	27.05
9999	Sundries	L.S	4.16	1.00	4.16
	TOTAL				99.47
	Add 1 % for water charges				0.99
	TOTAL				100.46
	Add 15% for contractor's profit and overheads				15.07
	Cost of 10.00 sqm				115.53
	Cost of 1.00 sqm				11.55
	Say				11.55

15.39 : Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but includmg stacking within 50 metres lead :

15.39.1: Upto 10mm thick

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.15	141.60	21.24
0114	Beldar	Day	0.20	135.25	27.05
0115	Coolie	Day	0.20	135.25	27.05
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				80.67
	Add 1 % for water charges				0.81
	TOTAL				81.48
	Add 15% for contractor's profit and overheads				12.22
	Cost of 10.00 sqm *tar*				93.70
	Cost of 1.00 sqm				9.37
	Say				9.35

15.39: Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but includmg stacking within 50 metres lead :

15.39.2 Thickness above 10 mm upto 25 mm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolie	Day	0.25	135.25	33.81
9999	Sundries	L.S	6.76	1.00	6.76
	TOTAL				102.70
	Add 1 % for water charges				1.03
	TOTAL				103.73
	Add 15% for contractor's profit and overheads				15.56
	Cost of 10.00 sqm				119.29
	Cost of 1.00 sqm				11.93
	Say				11.95

15.39: Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but includmg stacking within 50 metres lead :

15.39.3 Thickness above 25 mm upto 40 mm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.30	135.25	40.57
0115	Coolie	Day	0.30	135.25	40.57
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				122.85
	Add 1 % for water charges				1.23
	TOTAL				124.08
	Add 15% for contractor's profit and overheads				18.61
	Cost of 10.00 sqm				142.69
	Cost of 1.00 sqm				14.27
	Say				14.25

15.40: Dismantling precast conerete or stone slab in walls, partition walls etc, including stacking within 50 metres lead.

15.40.1: Thickness upto 40mm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	2.00	135.25	270.50
0115	Coolie	Day	0.50	135.25	67.62
9999	Sundries	L.S	13.39	1.00	13.39
	TOTAL				379.83
	Add 1% for water charges				3.80
	TOTAL				383.63
	Add 15% for contractor's profit and overheads				57.54
	Cost of 10.00 sqm				441.17
	Cost of 1.00 sqm				44.12
	Say				44.10

15.40: Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres:

15.40.2 Thickness above 40 mm upto 75 mm

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0124	Mason 2nd class	Day	0.30	141.60	42.48
0114	Beldar	Day	3.00	135.25	405.75
0115	Coolie	Day	0.75	135.25	101.44
9999	Sundries	L.S	18.85	1.00	18.85
	TOTAL				568.52
	Add 1% for water charges				5.69
	TOTAL				574.21
	Add 15% for contractor's profit and overheads				86.13
	Cost of 10.00 sqm				660.34
	Cost of 1.00 sqm				66.03
	Say				66.05

15.41 : Dismantling cement asbestos, Celotax or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				74.22
	Add 1% for water charges				0.74
	TOTAL				74.96
	Add 15% for contractor's profit and overheads				11.24
	Cost of 10.00 sqm				86.20
	Cost of 1.00 sqm				8.62
	Say				8.60

15.42: Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :

15.42.1 75 to 80 mm dia pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metres				
	LABOUR				
0114	Beldar	Day	0.36	135.25	48.69
0115	Coolie	Day	0.36	135.25	48.69
9999	Sundries	L.S	0.91	1.00	0.91
	TOTAL				98.29
	Add 1% for water charges				0.98
	TOTAL				99.27
	Add 15% for contractor's profit and overheads				14.89
	Cost of 10.0 metres				114.16
	Cost of 1.00 metre				11.42
	Say				11.40

15.42: Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :

15.42.2: 100 mm dia pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 metres				
	LABOUR				
0114	Beldar	Day	0.36	135.25	48.69
0115	Coolie	Day	0.38	135.25	51.40
9999	Sundries	L.S	1.56	1.00	1.56
	TOTAL				101.65
	Add 1 % for water charges				1.02
	TOTAL				102.67
	Add 15% for contractor's profit and overheads				15.40
	Cost of 10.00 metres				118.07
	Cost of 1.00 metre				11.81
	Say				11.80

15.42: Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :

15.42.3: 150 mm dia pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 metres				
	LABOUR				
0114	Beldar	Day	0.36	135.25	48.69
0115	Coolie	Day	0.40	135.25	54.10
9999	Sundries	LS	2.08	1.00	2.08
	TOTAL				104.87
	Add 1% for water charges				1.05
	TOTAL				105.92.
	Add 15% for contractor's profit and overheads				15.89
	Cost of 10.00 metres				121.81
	Cost of 1.00 metre				12.18
	Say				12.20

15.43: Dismantling manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50metres lead as per direction of Engineer-in-charge :

15.43.1: Water bound macadam road

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 36 sqm				
	Consider a road 6 metres wide and 6 metres length wise 25 cm average depth = 9.00 cubic metre				
	LABOUR				
	For cutting road taking out soling and metalling including sorting and screening				
0114	Beldar	Day	4.80	135.25	649.20
0115	Coolie	Day	2.40	135.25	324.60
9999	Labour for stacking of serviceable material and disposal of unserviceable material within 50 metres lead	L.S	89.70	1.00	89.70
	TOTAL				1063.50
	Add 1% for water charges				10.64
	TOTAL				1074.14
	Add 15% for contractor's profit and overheads				161.12
	Cost of 36.00 sqm				1235.26
	Cost of 1.00 sqm				34.31
	Say				34.30

15.43: Dismantling manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material wifnin 50 metres lead as per direction of Engineer-in-charge :

15.43.2: Bituminous road

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 36 sqm				
	Consider a road 6 metres wide and 6 metres length wise 30 cm average depth = 10.80 cubic metre				
	LABOUR				
	For cutting road taking out soling and metalling including sorting and screening				
0114	Beldar	Day	9.60	135.25	1298.40
0115	Coolie	Day	4.80	135.25	649.20
9999	Labour for stacking of serviceable material and disposal of unserviceable material within 50 metres lead	L.S	107.64	1.00	107.64
	TOTAL				2055.24
	Add 1 % for water charges				20.55
	TOTAL				2075.79
	Add 15% for contractor's profit and overheads				311.37
	Cost of 36.00 sqm				2387.16
	Cost of 1.00 sqm				66.31
	Say				66.30

15.44 Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes manually / by machanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :

15.44.1 15 mm to 40 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre				
	LABOUR				
	Trenching and refilling etc				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
9999	Dismantling G.I. pipe and stacking etc	L.S.	35.88	1.00	35.88
	TOTAL				214.40
	Add 1 % for water charges				2.14
	TOTAL				216.54
	Add 15% for contractor's profit and overheads				32.48
	Cost of 10.00 metre				249.02
	Cost of 1.00 metre				24.90
	Say				24.90

15.44 Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually / by machanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :

15.44.2 Above 40 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre				
	LABOUR				
	Trenching and refilling etc				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
9999	Dismantling G.I. pipe and stacking etc	L.S.	71.70	1.00	71.76
	TOTAL				250.28
	Add 1% for water charges				2.50
	TOTAL				252.78
	Add 15% for contractor's profit and overheads				37.92
	Cost of 10.00 metre				290.70
	Cost of 1.00 metre				29.07
	Say				29.05

15.45 Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes manually / by machanical means, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metre lead as per direction of Engineer-in-charge:

15.45.1 Upto 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.55x0.75 m= 16.61cum Deduct for pipes of average 100 mm dia =lx40.26x(22/7)/4x(0.018)x(0.018) =0.44cum =16.17cum LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	4.67	135.25	631.62
0115	Coolie	Day	4.80	135.25	649.20
0101	Bhisti	Day	0.27	138.45	37.38
0761	Fuel wood	quintal	0.46	265.00	121.90
0771	Kerosene oil	litre	0.38	19.00	7.22
0117	Assistant Fitter or 2nd class Fitter	Day	0.63	141.60	89.21
0114	Beldar	Day	4.50	135.25	608.62
9999	Carriage and	L.S.	53.82	1.00	53.82
	TOTAL				2198.97
	Add 1 % for water charges				21.99
	TOTAL				2220.96
	Add 15% for contractor's profit and overheads				333.15
	Cost of 40.26 metre				2554.11
	Cost of 1.00 metre				63.44
	Say				63.45

15.45 Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes manually/by mechaincal means. breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metre lead as per direction of Engineer-in-charge:

15.45.2 Above 150 mm dia upto 300 mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 40.26 metre or 11 nos joints				
	Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.65x0.75 m =19.63cum				
	Deduct for pipes of average 250 mm dia = lx40.26x(22/7)/4x(0.274)x(0.274)=2.37cum =17.26cum				
	LABOUR				
0114	Beldar	Day	4.99	135.25	674.90
0115	Coolie	Day	5.12	135.25	692.48
0101	Bhisti	Day	0.29	138.45	40.15
0761	Fuel wood	quintal	1.03	265.00	272.95
0771	Kerosene oil	litre	1.14	19.00	21.66
0117	Assistant Fitter or 2nd class Fitter	Day	1.30	141.60	184.08
0114	Beldar	Day	7.50	135.25	1014.38
9999	Carriage	L.S.	80.73	1.00	80.73
	TOTAL				2 981.33
	Add 1 % for water charges				29.81
	TOTAL				3 011.14
	Add 15% for contractor's profit and overheads				451.67
	Cost of 40.26 metre				3 462.81
	Cost of 1.00 metre				86.01
	Say				86.00

15.45 Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes manually/by machanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metre lead as per direction of Engineer-in-charge:

15.45.3 Above 300 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x0.85x0.75 m =25.67cum Deduct for pipes of average 450 mm dia =lx40.26x(22/7)/4x(0.48)x(0.48) =7.29cum = 18.38cum				
	LABOUR				
0114	Beldar	Day	5.32	135.25	719.53
0115	Coolie	Day	5.46	135.25	738.47
0101	Bhisti	Day	0.31	138.45	42.92
0761	Fuel wood	quintal	1.40	265.00	371.00
0771	Kerosene oil	litre	2.27	19.00	43.13
0117	Assistant Fitter or 2nd class Fitter	Day	2.25	141.60	318.60
0114	Beldar	Day	11.50	135.25	1 555.38
9999	Carriage & Sundries	L.S.	134.55	1.00	134.55
	TOTAL				3 923.58
	Add 1% for water charges				39.24
	TOTAL				3 962.82
	Add 15% for contractor's profit and overheads				594.42
	Cost of 40.26 metre				4 557.24
	Cost of 1.00 metre				113.20
	Say				113.20

15.46 Dismantling steel cylinder R.C. pipes including excavation and refilling trenches after taking out the pipes manually/ by machanical maeans breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metres lead as per direction of Engineer-in-charge:

15.46.1 Upto 600 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 1x40.26x1.30x1.65 m =86.36cum Deduct for pipes of average 450 mm dia =1x40.26x(22/7)/4x(0.48)x(0.48) =7.29 cum = 79.07 cum				
	LABOUR				
0114	Beldar	Day	5.32	135.25	719.53
0115	Coolie	Day	5.46	135.25	738.47
0101	Bhisti	Day	0.31	138.45	42.92
0761	Fuel wood	quintal	1.40	265.00	371.00
0771	Kerosene oil	litre	2.27	19.00	43.13
0117	Assistant Fitter or 2nd class Fitter	Day	2.25	141.60	318.60
0114	Beldar	Day	11.50	135.25	1555.38
9999	Carriage and sundries	L.S.	134.55	1.00	134.55
	TOTAL				3923.58
	Add 1 % for water charges				39.24
	TOTAL				3 962.82
	Add 15% for contractor's profit and overheads				594.42
	Cost of 40.26 metre				4 557.24
	Cost of 1.00 metre				113.20
	Say				113.20

15.46 Dismantling steel cylinder R.C. pipes including excavation and refilling trenches after taking out the pipes breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metres lead as per direction of Engineer-in-charge:

15.46.2 Above 600 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 40.26 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth lx40.26xl.30xl.65 m =86.36cum Deduct for pipes of average 900 mm dia = 1 x40.26x(22/7)/4x(1.00)x(1.00) =31.63cum =54.73 cum LABOUR				
0114	Beldar	Day	15.82	135.25	2139.66
0115	Coolie	Day	16.25	135.25	2197.81
0101	Bhisti	Day	0.93	138.45	128.76
0761	Fuel wood	quintal	3.08	265.00	816.20
0771	Kerosene oil	litre	5.00	19.00	95.00
0117	Assistant Fitter or 2nd class Fitter	Day	10.00	141.60	1416.00
0114	Beldar	Day	20.00	135.25	2 705.00
9999	Carriage and sundries	L.S.	179.40	1.00	179.40
	TOTAL				9677.84
	Add 1% for water charges				96.78
	TOTAL				9 774.62
	Add 15% for contractor's profit and overheads				1466.19
	Cost of 40.26 metre				11 240.81
	Cost of 1.00 metre				279.21
	Say				279.20

15.47 Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually / by mechanical means and stacking pipes within 50 metres lead as per direction of Engineer-in-charge:

15.47.1 Upto 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre or 11 nos joints Earth work in excavation for dismantling pipes including refilling of excavated earth 10.00x0.55x0.75 m =4.125cum Deduct for pipes of average 100 mm dia =1x10x(22/7)/4x(0.118)x(0.118) =0.109cum =4.016cum LABOUR				
0114	Beldar	Day	1.16	135.25	156.89
0115	Coolie	Day	1.19	135.25	160.95
0101	Bhisti	Day	0.07	138.45	9.69
0114	Beldar	Day	0.36	135.25	48.69
0115	Coolie	Day	0.38	135.25	51.40
9999	Carriage and sundries	L.S.	1.56	1.00	1.56
	TOTAL				429.18
	Add 1% for water charges				4.29
	TOTAL				433.47
	Add 15% for contractor's profit and overheads				65.02
	Cost of 10.00 metre				498.49
	Cost of 1.00 metre				49.85
	Say				49.85

15.47. Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually / by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-charge:

15.47.2 Above 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 metre or 11 nos joints				
	Earth work in excavation for dismantling pipes including refilling of excavated earth 10.00x0.65x0.75 m =4.88cum				
	Deduct for pipes of average 250 mm dia = lxl0x(22/7)/4x(0.274)x(0.274)=0.590cum =4.29cum				
	LABOUR				
0114	Beldar	Day	1.24	135.25	167.71
0115	Coolie	Day	1.28	135.25	173.12
0101	Bhisti	Day	0.07	138.45	9.69
0114	Beldar	Day	0.36	135.25	48.69
0115	Coolie	Day	0.88	135.25	119.02
9999	Carriage and sundries	L.S.	3.77	1.00	3.77
	TOTAL				522.01
	Add 1% for water charges				5.22
	TOTAL				527.23
	Add 15% for contractor's profit and overheads				79.08
	Cost of 10.00 metre				606.31
	Cost of 1.00 metre				60.63
	Say				60.65

15.48 Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually / by mechanical means and stacking of usefull materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 man hole				
	Demolition of R.C.C. slab 1.3x1.2x0.15 m=0.234cum				
	Less cover 0.61x0.455x0.15 m =0.042cum =0.192cum				
	LABOUR				
0114	Beldar	Day	0.50	135.25	67.62
0115	Coolie	Day	0.14	135.25	18.94
9999	Removel of C.I. Cover with frame including stacking	L.S.	1.30	1.00	1.30
9999	Sundries	L.S.	7.15	1.00	7.15
	TOTAL				95.01
	Add 1% for water charges				0.95
	TOTAL				95.96
	Add 15% for contractor's profit and overheads				14.39
	Cost of 1 each				110.35
	Say				110.35

15.49 Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 man hole Demolition of R.C.C. slab 1.1x0.9x0.15 m=0.148cum Less cover 0.61x0.455x0.15 m =0.042cum =0.106cumSay 0.11 cum LABOUR				
0114	Beldar	Day	0.29	135.25	39.22
0115	Coolie	Day	0.08	135.25	10.82
9999	Removel of C.I. Cover with frame including stacking	L.S.	0.65	1.00	0.65
9999	Sundries	L.S.	5.33	1.00	5.33
	TOTAL				56.02
	Add 1% for water charges				0.56
	TOTAL				56.58
	Add 15% for contractor's profit and overheads				8.49
	Cost of 1 each				65.07
	Say				65.05

15.50 Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 each Dismantling cement concrete (a) 1:4:8: 0.90x0.90x1.35m =1.094cum Less shaft 1/4x22/7x(0.450)x(0.450)x1.10 m =0.175cum =0.919cum Say 0.92cum Dismantling cement concrete (b)1:2:4 : 90x0.90x0.15m =0.122cum Less shaft 1/4x22/7x0.15x0.45 m =0.024cum =0.098cum Say 0. lOcum LABOUR				
0114	Beldar	Day	0.81	135.25	109.55
0115	Coolie	Day	0.51	135.25	68.98
9999	Sundries	L.S.	1.82	1.00	1.82
0114	Beldar	Day	0.16	135.25	21.64
0115	Coolie	Day	0.07	135.25	9.47
9999	Sundries	L.S.	0.52	1.00	0.52
0130	Mistry	Day	0.25	151.50	37.88
0123	Mason 1 st class	Day	0.12	151.50	18.18
0124	Mason 2nd class	Day	0.12	141.60	16.99
0100	Bandhani	Day	1.00	138.45	138.45
0114	Beldar	Day	1.00	135.25	135.25
9999	Sundries for scaffolding etc	L.S.	53.82	1.00	53.82
	TOTAL				612.55
	Add 1 % for water charges				6.13
	TOTAL				618.68
	Add 15% for contractor's profit and overheads				92.80
	Cost of Each				711.48
	Say				711.50

15.51 Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead including refilling the excavated gap.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one chamber				
	Dismantling cement concrete				
	a) 1:5:10 : 1.05x1.00x0.15m=0.16cum				
	Dismantling brick work in cement mortar				
	2.70x0.20x0.45m =0.24cum				
	Dismantling cement concrete				
	b) 1:2:4: 2.70x0.20x0.15m =0.08cum				
	LABOUR				
0114	Beldar	Day	0.14	135.25	18.94
0115	Coolie	Day	0.09	135.25	12.17
9999	Sundries	L.S.	0.26	1.00	0.26
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolie	Day	0.22	135.25	29.76
9999	Sundries	L.S.	0.52	1.00	0.52
0114	Beldar	Day	0.13	135.25	17.58
0115	Coolie	Day	0.06	135.25	8.12
9999	Sundries for scaffolding etc	L.S.	0.39	1.00	0.39
9999	Dismantling C.I. Grating	L.S.	7.15	1.00	7.15
	TOTAL				128.70
	Add 1% for water charges				1.29
	TOTAL				129.99
	Add 15% for contractor's profit and overheads				19.50
	Cost of 1 each				149.49
	Say				149.50

15.52 Dismantling of flushing cistern of any size including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 each				
	LABOUR				
0116	Fitter (grade 1)	Day	0.25	151.50	37.88
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S.	17.94	1.00	17.94
	TOTAL				123.44
	Add 1 % for water charges				1.23
	TOTAL				124.67
	Add 15% for contractor's profit and overheads				18.70
	Cost of 1 each				143.37
	Say				143.35

53.53 Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres

15.53.1 Upto 150mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost of dismantling 10 sluice valves (ace.) 100mm				
	LABOUR				
0116	Fitter (grade 1)	Day	0.60	151.50	90.90
0117	Assistant Fitter or 2nd class Fitter	Day	0.40	141.60	56.64
0114	Beldar	Day	1.60	135.25	216.40
9999	Sundries for removing the R.C.C. cover etc for dismantling sluice valve	L.S.	89.70	1.00	89.70
	TOTAL				453.64
	Add 1% for water charges				4.54
	TOTAL				458.08
	Add 15% for contractor's profit and overheads				68.73
	Cost of 10 Nos				526.91
	Cost of 1 No				52.69
	Say				52.70

15.53 Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres

15.53.2 Above 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost of dismantling 10 sluice valves (ace.) 100mm				
	LABOUR				
0116	Fitter (grade 1)	Day	2.40	151.50	363.60
0117	Assistant Fitter or 2nd class Fitter	Day	1.54	141.60	218.06
0114	Beldar	Day	6.40	135.25	865.60
9999	Sundries for removing the R.C.C. cover etc for dismantling sluice valve	L.S.	89.70	1.00	89.70
	TOTAL				1536.96
	Add 1 % for water charges				15.37
	TOTAL				1552.33
	Add 15% for contractor's profit and overheads				232.85
	Cost of 10 Nos				1785.18
	Cost of 1 No				178.52
	Say				178.50

15.54 Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 Nos				
	LABOUR				
0116	Fitter (grade 1)	Day	1.50	151.50	227.25
0117	Assistant Fitter or 2nd class Fitter	Day	1.00	141.60	141.60
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				909.85
	Add 1 % for water charges				9.10
	TOTAL				918.95
	Add 15% for contractor's profit and overheads				137.84
	Cost of 10 Nos				1056.79
	Cost of 1 No				105.68
	Say				105.70

15.55 Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead :

15.55.1 120 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one platform				
	Dismantling cement concret 1:5:10				
	4.00x0.35x0.12m =0.168cum				
	0.80x0.80x0.075m =0.048cum				
	=0.216cum Say 0.22cum				
	Dismantling brick work in cement mortar				
	4.00x0.20x0.30m =0.24cum				
	4.00x0.10x0.20m =0.088cum				
	=0.328cum Say 0.33cum				
	Dismantling 40 mm C.C. flooring 1:2:4				
	1.00x 1.00x0.04m =0.04cum				
	LABOUR				
0114	Beldar	Day	0.19	135.25	25.70
0115	Coolie	Day	0.12	135.25	16.23
9999	Sundries	L.S.	0.39	1.00	0.39
0114	Beldar	Day	0.35	135.25	47.34
0115	Coolie	Day	0.30	135.25	40.57
9999	Sundries	L.S.	0.91	1.00	0.91
0114	Beldar	Day	0.06	135.25	8.12
0115	Coolie	Day	0.03	135.25	4.06
9999	Sundries for scaffolding etc	L.S.	0.13	1.00	0.13
	TOTAL				143.45
	Add 1% for water charges				1.43
	TOTAL				144.88
	Add 15% for contractor's profit and overheads				21.73
	Cost of 1 each				166.61
	Say				166.60

15.55 Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead :

15.55.2 210 x 120 cm (outside to outside)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one platform				
	Dismantling cement concrete 1:5:10				
	5.80x0.35x0.22m =0.243cum				
	0.80x1.70x0.075m =0.102cum				
	=0.345cum Say 0.35cum				
	Dismantling brick work in cement mortar				
	5.80x0.20x0.30m =0.348cum				
	6.20x0.10x0.20m =0.124cum				
	=0.472cum Say 0.47cum				
	Dismantling 40 mm C.C. flooring 1:2:4				
	1.90x 1.00x0.04m =0.08cum				
	LABOUR				
0114	Beldar	Day	0.31	135.25	41.93
0115	Coolie	Day	0.19	135.25	25.70

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	0.65	1.00	0.65
0114	Beldar	Day	0.50	135.25	67.62
0115	Coolie	Day	0.42	135.25	56.80
9999	Sundries	L.S.	1.30	1.00	1.30
0114	Beldar	Day	0.13	135.25	17.58
0115	Coolie	Day	0.06	135.25	8.12
9999	Sundries for scaffolding etc	L.S.	0.39	1.00	0.39
	TOTAL				220.09
	Add 1% for water charges				2.20
	TOTAL				222.29
	Add 15% for contractor's profit and overheads				33.34
	Cost of 1 each				255.63
	Say				255.65

15.55 Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useAl materials near the site and disposal of unserviceable materials within 50 metres lead :

15.55.3 320 x 120 cm (outside to outside

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one platform				
	Dismantling cement concrete l:5:10				
	8.00x0.35x0.12m =0.336cum				
	2.80x0.80x0.075m =0.168cum				
	=0.504cum Say 0.50cum				
	Dismantling brick work in cement mortar				
	8.00x0.20x0.30m =0.48cum				
	8.40x0.10x0.20m =0.168cum				
	=0.648cum Say 0.65cum				
	Dismantling 40 mm C.C. flooring 1:2:4				
	3.00x1.00x0.04m =0.12cum				
	LABOUR				
0114	Beldar	Day	0.44	135.25	59.51
0115	Coolie	Day	0.28	135.25	37.87
9999	Sundries	L.S.	0.91	1.00	0.91
0114	Beldar	Day	0.69	135.25	93.32
0115	Coolie	Day	0.59	135.25	79.80
9999	Sundries	L.S.	1.56	1.00	1.56
0114	Beldar	Day	0.19	135.25	25.70
0115	Coolie	Day	0.09	135.25	12.17
9999	Sundries for scaffolding etc	L.S.	0.52	1.00	0.52
	TOTAL				311.36
	Add 1 % for water charges				3.11
	TOTAL				314.47
	Add 15% for contractor's profit and overheads				47.17
	Cost of 1 each				361.64
	Say				361.65

15.56 Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0114	Beldar	Day	0.36	135.25	48.69
0115	Coolie	Day	0.08	135.25	10.82
0101	Bhisti	Day	0.07	138.45	9.69
9999	Sundries for scaffolding etc	L.S.	1.43	1.00	1.43
	TOTAL				70.63
	Add 1% for water charges				0.71
	TOTALr				71.34
	Add 15% for contractor's profit and overheads				10.70
	Cosfof 10.00 sqm				82.04
	Cost of 1.00 sqm				8.20
	Say				8.20

15.57 Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	LABOUR				
0112	Carpenter 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.30	135.25	40.57
9999	Sundries	L.S.	5.38	1.00	5.38
	TOTAL				74.27
	Add 1% for water charges				0.74
	TOTAL				75.01
	Add 15% for contractor's profit and overheads				11.25
	Cost of 10.00 sqm				86.26
	Cost of 1.00 sqm				8.63
	Say				8.65

15.58 Demolishing C.C. /R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials upto a lead of 1000m, stacking serviceable and unserviceable material separately including cutting reinforcement bars.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum				
	LABOUR				
0128	Mate	Day	0.03	138.45	4.15
	Labour for operating pneumatic tools				
0139	Skilled Beldar	Day	0.50	138.45	69.22
0114	Beldar	Day	0.50	135.25	67.62
	Labour for cutting reinforcement bars.				
0103	Blacksmith 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	0.50	135.25	67.62
	MACHINERY				

Code	Description	Unit	Quantity	Rate	Amount
0040	Air compressor 250 cfm with two leads for preumatic cutters/ hammers.	Day	0.125	1600.00	200.00
0039	Tractor trolley .	per day	0.05	1000.00	50.00
0041	Joint cutting machine with 2-3 blades	per day	0.125	800.00	100.00
	TOTAL				629.41
	Add 1% for water charges				6.29
	TOTAL				635.70
	Add 15% for contractor's profit and overhead				95.36
	Cost for 1 cum				731.06
	Say				731.05

15.59 Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material upto a lead of 1000 metres, as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum				
	LABOUR				
0128	Mate	Day	0.01	138.45	1.38
0114	Beldar	Day	0.30	135.25	40.57
	MACHINERY				
0039	Tractor trolley.	per day	0.0475	1000.00	47.50
0038	Tractor with ripper attachment.	per day	0.002	1000.00	2.00
	TOTAL				91.45
	Add 1% for water charges.				0.91
	TOTAL				92.36
	Add 15% for contractor's profit and overhead				13.85
	Cost for 1 cum				106.21
	Say				106.20

SUB HEAD : 16.0

ROAD WORK

16.1 : Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	(A) preparation of subgrade.				
	Earth work in excavation including dressing etc. 100sqm.x22.5cm (average depth) = 22.5cum.				
	Labour				
0128	Mate	Day	1.80	138.45	249.21
0115	Coolie	Day	18.00	135.25	2,434.50
0114	Beldar	Day	0.27	135.25	36.52
0003	Hire charges of road roller	Day	0.054	1000.00	54.00
0113	Chowkidar	Day	0.054	135.25	7.30
1235	Diesel for road roller @ 18 litres	litre	0.972	30.25	29.40
9999	Carriage of diesel	L.S.	1.43	1.00	1.43
9999	Sundries	L.S.	6.76	1.00	6.76
	(B) Conslidation of subgrade				
	Roller charges (one roller does 1860 sqm. of conosolidation of sub - grade with road roller of 8 to 12 tonne capacity including making good the undulations etc. with earth or quarry spoils etc. and rerolling the subgrade				
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	Day	0.054	1 000.00	54.00
0113	Chowkidar	Day	0.054	135.25	7.30
1235	Diesel oil	litre	0.972	30.25	29.40
9999	Carriage of diesel.	L.S.	1.43	1.00	1.43
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				2,918.01
	Add 1 % for water charges				29.18
	TOTAL				2,947.19
	Add 15% for contractor's profit and overheads				442.08
	Cost for 100 sqm.				3,389.27
	Cost per sqm.				33.89
	Say				33.90

16.2 : Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 cum.				
	Labour				
	(Extra to item No.2.3 in Earth work)				
0101	Bhishti	Day	0.17	138.45	23.54
	Roller charges (one roller does 1860sqm. of consolidation per day of 8 hours and uses 18 litres diesel)				
0003	Hire charges of road roller	Day	0.008	1 000.00	8.00
0113	Chowkidar	Day	0.008	135.25	1.08
1235	Diesel for road roller @ 18 litres per day i.e. 0.008x18=0.144 litres	litre	0.144	30.25	4.36

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of diesel	L.S.	0.39	1.00	0.39
9999	Sundries	L.S.	1.43	1.00	1.43
	TOTAL				38.80
	Add 1% for water charges				0.39
	TOTAL				39.19
	Add 15 % for contractor's profit and overheads				5.88
	Cost of 10 cum.				45.07
	Cost per cum.				4.51
	Say				4.50

16.3 : Supplying and stacking at site.
16.3.1 : 90 mm to 45 mm size stone aggregate.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Materials :				
2901	Stone Aggregate 125 mm (one size)	cum	0.10	575.00	57.50
2902	Stone Aggregate 90 mm (one size)	cum	0.65	575.00	373.75
0291	Stone Aggregate 63 mm (one size)	cum	0.25	600.00	150.00
2206	Carriage	cum	1.00	57.83	57.83
	Total				639.08
	Add 1% for water charges.				6.39
	Total				645.47
	Add 15% for contractor's profit and overheads				96.82
	Cost for 1 cum				742.29
	Say				742.30

16.3 Supplying and stacking at site.
16.3.2 63 mm to 45 mm size stone aggregate.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Materials :				
2902	Stone Aggregate 90 mm (one size).	cum	0.10	575.00	57.50
0291	Stone Aggregate 63 mm (one size)	cum	0.65	600.00	390.00
0292	Stone Aggregate 53 mm (one size)	cum	0.25	625.00	156.25
2206	Carriage of aggregate	cum	1.00	57.83	57.83
	Total				661.58
	Add 1% for water charges.				6.62
	Total				668.20
	Add 15% for contractor's profit and overheads				100.23
	Cost for 1 cum				768.43
	Say				768.45

16.3 : Supplying and stacking at site.
16.3.3 : 53 mm to 22.4 mm size stone aggregate.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Materials :				
0291	Stone Aggregate 63mm (one size)	cum	0.05	600.00	30.00
0292	Stone Aggregate 53 mm (one size)	cum	0.30	625.00	187.50
0293	Stone Aggregate 45mm (one size)	cum	0.65	650.00	422.50
2206	Carriage	cum	1.00	57.83	57.83

Code	Description	Unit	Quantity	Rate	Amount
	Total				697.83
	Add 1% for water charges.				6.98
	Total				704.81
	Add 15 % for contractor's profit and overheads				105.72
	Cost for 1 cum				810.53
	Say				810.55

16.3 Supplying and stacking at site.

16.3.4 Over burnt (Jhama) brick aggregate 120 mm to 40 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	Materials :				
2908	Brick aggregate 120 mm to 40 mm size	cum	1.00	285.00	285.00
2260	Carriage	cum	1.00	57.83	57.83
	Total				342.83
	Add 1% for water charges.				3.43
	Total				346.26
	Add 15% for contractor's profit and overheads				51.94
	Cost for 1 cum				398.20
	Say				398.20

16.3 Supplying and stacking at site.

16.3.5 Over burnt (Jhama) brick aggregate 90 mm to 45 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Materials :				
2909	Brick aggregate 90mm to 45mm	cum	1.00	320.00	320.00
2260	Carriage	cum	1.00	57.83	57.83
	Total				377.83
	Add 1% for water charges.				3.78
	Total				381.61
	Add 15% for contractor's profit and overheads				57.24
	Cost for 1 cum				438.85
	Say				438.85

16.3 Supplying and stacking at site.

16.3.6 Stone screening 13.2 mm nominal size (Type A).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Material				
2910	Stone chippings 13.2mm	cum	0.05	700.00	35.00
2911	Stone chippings 10mm/11.2mm	cum	0.80	700.00	560.00
2903	Stone chippings 5.6mm	cum	0.15	800.00	120.00
2202	Carriage	cum	1.00	53.21	53.21
	TOTAL				768.21
	Add 1% for water charges				7.68
	TOTAL				775.89
	Add 15% for contractor's profit and overheads				116.38
	Cost for one cum.				892.27
	Say				892.25

16.3 Supplying and stacking at site.
16.3.7 Stone screening 11.2 mm nominal size (Type B)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Material				
2911	Stone chippings 11.2mm	cum	0.10	700.00	70.00
2903	Stone chippings 5.6mm	cum	0.75	800.00	600.00
2904	Stone screenings 180 mircorn	cum	0.15	800.00	120.00
2202	Carriage of stone aggregate 11.2mm & 5.6mm	cum	0.85	53.21	45.23
2267	Carriage of stone screenings 180 mircron (dust)	cum	0.15	53.21	7.98
	TOTAL				843.21
	Add 1% for water charges				8.43
	TOTAL				851.64
	Add 15% for contractor's profit and overheads				127.75
	Cost for one cum.				979.39
	Say				979.40

16.3 Supplying and stacking at site.
16.3.8 Red bajri

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Material				
0304	Cost of bajri at quarry	cum	1.00	510.00	510.00
2311	Carriage	cum	1.00	53.21	53.21
	TOTAL				563.21
	Add 1% for water charges				5.63
	TOTAL				568.84
	Add 15% for contractor's profit and overheads				85.33
	Cost for one cum.				654.17
	Say				654.15

16.3 Supplying and stacking at site.
16.3.9 Good earth.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Excavation:				
0114	Beldar	Day	0.177	135.25	23.94
0115	Coolie	Day	0.167	135.25	22.59
0979	Royalty for good earth	cum	1.00	11.00	11.00
2241	Carriage of good earth by mechanical transport upto 1 km lead	cum	1.00	66.51	66.51
	TOTAL				124.04
	Add 1% for water charges				1.24
	TOTAL				125.28
	Add15% for contractor's profit and overheads				18.79
	Cost per cum.				144.07
	Say				144.05

16.3 Supplying and stacking at site.

16.3.10 Moorum.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Material				
0810	Cost of moorum at quarry	cum	1.00	310.00	310.00
2265	Carriage	cum	1.00	53.21	53.21
	TOTAL				363.21
	Add 1% for water charges				3.63
	TOTAL				366.84
	Add 15% for contractor's profit and overheads				55.03
	Cost for one cum.				421.87
	Say				421.85

16.4 Laying , spreading and compacting stone aggregate of specified sizes to WBM specifications including spreading in uniform thickness, hand picking , rolling with 3 wheeled road / vibratory roller 8-10 tonne in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fillup interstices of coarse aggregate watering and compacting to the required density.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Labour				
0114	Beldar	Day	0.26	135.25	35.16
0115	Coolie	Day	0.26	135.25	35.16
0101	Bhisti	Day	0.26	138.45	36.00
	Roller charges (one roller does 30 cum consolidation per day of 8 hours and uses 18 litres of diesel oil).				
0003	Hire charges of Road Roller	Day	0.033	1000.00	33.00
0113	Chowkidar	Day	0.033	135.25	4.46
	Diesel for road roller @ 18 litres 0.033x18 = 0.59				
1235	Diesel oil	litre	0.59	30.25	17.85
9999	Carriage of diesel	L.S.	1.43	1.00	1.43
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				165.79
	Add 1% for water charges				1.66
	TOTAL				167.45
	Add 15% for contractor's profit and overheads				25.12
	Cost for 1 cum				192.57
	Say				192.55

16.5 Laying water bound macadam sub-base withbrick aggregate and blinding material, earth etc. including screening, sorting and spreading to template and consolidation with light power road-roller etc. complete. (payment for brick aggregate and moorum etc. to be made separately)

16.5.1 Over burnt (Jhama) brick aggregate 120 mm to 40 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Labour				
0114	Beldar	Day	0.35	135.25	47.34
0115	Coolie	Day	0.26	135.25	35.16

Code	Description	Unit	Quantity	Rate	Amount
0101	Bhishti Roller charges (one roller does 230cum. consolidation per day of 8 hours and uses 18 litres of diesel oil)	Day	0.18	138.45	24.92
0003	Hire charges of road roller	Day	0.004	1000.00	4.00
0113	Chowkidar	Day	0.004	135.25	0.54
1235	Diesel for road roller @ 18 litres per day 18x0.004=0.072	litre	0.072	30.25	2.18
9999	Carriage of diesel	L.S.	0.39	1.00	0.39
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				117.26
	Add 1 % for water charges				1.17
	TOTAL				118.43
	Add 15% for contractor's profit and overheads				17.76
	Cost for one cum.				136.19
	Say				136.20

16.5 Laying water bound macadam sub-base withbrick aggregateand blinding material, earth etc. including screening, sorting and spreading to template and consolidation with light power road-roller etc. complete.(payment for brick aggregate and moorum etc. to be made separately)

16.5.2 Over burnt (Jhama) brick aggregate 90 mm to 45 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Labour				
0114	Beldar	Day	0.35	135.25	47.34
0115	Coolie	Day	0.26	135.25	35.16
0101	Bhishti Roller charges (one roller does 230cum. consolidation per day of 8 hours and uses 18 litres of diesel oil)	Day	0.18	138.45	24.92
0003	Hire charges of road roller	Day	0.004	1 000.00	4.00
0113	Chowkidar	Day	0.004	135.25	0.54
1235	Diesel for road roller @ 18 litres per day 18x0.004=0.072	litre	0.072	30.25	2.18
9999	Carriage of diesel	L.S.	0.39	1.00	0.39
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				117.26
	Add 1 % for water charges				1.17
	TOTAL				118.43
	Add 15% for contractor's profit and overheads				17.76
	Cost for one cum.				136.19
	Say				136.20

16.6 Supplying, stacking and Spreading 6 mm thick red bajri, watering and rolling complete including preparation of the surface and rolling.

16.6.1 With road roller/ hand roller.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 6 mm thick and 100.00 sqm area = 0.60 cum.				
	(A) Supplying and stacking of Red bajri at site.				
	Material:				
0304	Red Bajri	cum	0.60	510.00	306.00

Code	Description	Unit	Quantity	Rate	Amount
2311	Carriage of Red bajri	cum	0.6	53.21	31.93
	(B) Spreading of red bajri				
	Labour				
0114	Beldar	Day	0.54	135.25	73.04
0101	Bhishti	Day	0.54	138.45	74.76
	Roller charges (one roller does 1860sqm. consolidation per day of 8 hours and uses 18 litres of diesel oil)				
0003	Hire charges of road roller	Day	0.054	1000.00	54.00
0113	Chowkidar	Day	0.054	135.25	7.30
1235	Diesel for road roller @ 18 litres per day i.e. 18x0.054=0.972	litre	0.972	30.25	29.40
9999	Carriage of diesel	L.S.	1.43	1.00	1.43
	TOTAL				577.86
	Add 1 % for water charges				5.78
	TOTAL				583.64
	Add 15% for contractor's profit and overheads				87.55
	Cost for 100 sqm.				671.19
	Cost per sqm.				6.71
	Say				6.70

16.7 Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.

16.7.1 With F.P.S. bricks of class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 m.				
	Material				
2602	Bricks of class designation 75 including 12% wastage	1000 Nos	160.00	1,900.00	304.00
2201	Carriage of Bricks	1000 Nos	160.00	141.88	22.70
0123	Mason 1st class	Day	0.17	151.50	25.76
0124	Mason 2nd class	Day	0.17	141.50	24.07
0115	Coolie	Day	0.35	135.25	47.34
9999	Removal of rubbish	L.S.	17.94	1.00	17.94
9999	Sundries	L.S.	8.97	1.00	8.97
	TOTAL				450.78
	Add 1% for water charges				4.51
	TOTAL				455.29
	Add 15% for contractor's profit and overheads				68.29
	Cost for 10m.				523.58
	Cost per m.				52.36
	Say				52.35

16.8 Brick edging laid lengthwise with half brick depthincluding excavation, refilling and disposal of surplus earth lead upto50 metres :

16.8.1 With F.P.S. bricks of class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 m.				
	Material				
2602	Bricks of class designation 75 including 12% wastage	1000 Nos	49	1,900.00	93.10
2201	Carriage of Bricks	1000 Nos	49.00	141.88	6.95
	Labour				
0123	Mason 1st class	Day	0.04	151.50	6.06
0124	Mason 2nd class	Day	0.04	141.60	5.66
0115	Coolie	Day	0.09	135.25	12.17
9999	Removal of rubbish	L.S.	4.16	1.00	4.16
	TOTAL				128.10
	Add 1% for water charges				1.28
	TOTAL				129.38
	Add 15% for contractor's profit and overheads				19.41
	Cost for 10m.				148.79
	Cost per m.				14.88
	Say				14.90

16.9 Scarifying metalled (water-bound) road surface including disposal of rubbish lead upto 50m and consolidation of the aggregate received from scarifying with power road roller of 8 to lOtonne capacity.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	Labour				
0114	Beldar	Day	1.35	135.25	182.59
0115	Coolie	Day	1.08	135.25	146.07
	Consolidation of scarified material				
	100sqm.x50mm = 5cum				
	Less 20% wastage = 1 cum.				
	= 4 cum.				
0003	Hire charges of road roller	Day	0.132	1 000.00	132.00
0113	Chowkidar	Day	0.132	135.25	17.85
1235	Diesel for road roller @ 18 litres/ day(8 hour)	litre	2.376	30.25	71.87
9999	Carriage	L.S.	1.43	1.00	1.43
9999	Sundries	L.S.	5.46	1.00	5.46
	TOTAL				557.27
	Add 1% for water charges				5.57
	TOTAL				562.84
	Add 15% for contractor's profit and overheads				84.43
	Cost for 100 sqm.				647.27
	Cost per sqm.				6.47
	Say				6.45

16.10 Making bajri path including preparation of subgrade, supplying and laying brick aggregate of 50mm nominal size 7.5 cm deep with blinding material consisting of 12 mm moorum and 12 mm red bajri consolidated with road roller.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	Earth work in excavation including dressing etc.				
	100x0.075=7.5cum.				
	(A)(Rate as per item no. 2.6.1 of S.H. Earth work)	cum	7.50	101.85	763.88
	Collection and stacking of brick aggregate				
	53 mm nominal size 100x0.075 =7.50cum.				
	Brick Aggregate				
0286	53 mm nominal size 100x0.75=7.50cum.	cum	7.50	355.00	2,662.50
2260	Carriage	cum	7.50	57.83	433.72
	Supply staking Red Bajri				
	100x0.012= 1.2 cum.				
	(A) (Rate as per item No.16.3.8)	cum	1.20	654.15	784.98
	Collection and stacking of moorum at site				
	100x0.012= 1.20cum.				
	(Rate as per item No.16.3.10)	cum	1.20	421.85	506.22
	Spreading and consolidation of brick aggregate and blinding material etc.				
0114	Beldar	Day	1.95	135.25	263.74
0115	Coolie	Day	2.63	135.25	355.72
0101	Bhishti	Day	1.35	138.45	186.91
0003	Hire charges of road roller	Day	0.135	1 000.00	135.00
0113	Chowkidar	Day	0.135	135.25	18.26
1235	Diesel for road roller @ 18 litres/ day(8 hour)	litre	2.43	30.25	73.51
9999	Carriage of diesel	L.S.	10.79	1.00	10.79
9999	Sundries	L.S.	20.15	1.00	20.15
	Spreading of red bajri, watering and rolling				
0003	Roller charges	Day	0.054	1 000.00	54.00
0113	Chowkidar	Day	0.054	135.25	7.30
1235	Diesel for road roller	litre	0.972	30.25	29.40
9999	Carriage of diesel	L.S.	0.55	1.00	1.43
	TOTAL				6,307.50
	Add 1 % for water charges on all except ‘A’				42.52
	TOTAL				6,350.02
	Add 15% for contractor’s profit and overheads on all except ‘A’				644.24
	Cost for 100 sqm.				6,994.26
	Cost per sqm.				69.94
	Say				69.95

16.11 Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm.				
	Material				
	Stone for pitching 15 cm x				
1158	22.5 crn thick	cum	2.25	332.00	747.00
2216	Carriage 2.25x2245/1000 = 5.05 t	tonne	5.05	47.29	238.81
	Labour				
0123	Mason 1 st class	Day	1.08	151.50	163.62
0124	Mason 2nd class	Day	1.08	141.60	152.93
0114	Beldar	Day	2.15	135.25	290.79
0115	Coolie	Day	1.61	135.25	217.75
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				1 817.66
	Add 1% for water charges				18.18
	TOTAL				1 835.84
	Add 15% for contractor's profit and overheads				275.38
	Cost for 10 sqm.				2 111.22
	Cost per sqm.				211.12
	Say				211.10

16.12 Dry brick pitching half brick thick in drains including supply of bricks and preparing the surface complete :

16.12.1 With F.P.S. bricks of class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm.				
	Material				
2602	Bricks of class designation 75	1 000 Nos	645.0	1,900.00	1,225.50
2201	Carriage for bricks	1 000 Nos	645.0	141.88	91.51
	Labour				
0123	Mason 1st class	Day	0.40	151.50	60.60
0124	Mason 2nd class	Day	0.40	141.60	56.64
0114	Beldar	Day	1.08	135.25	146.07
	TOTAL				1,580.32
	Add 1% for water charges				15.80
	TOTAL				1,596.12
	Add 15% for contractor's profit and overheads				239.42
	Cost for 10 sqm.				1,835.54
	Cost per sqm.				183.55
	Say				183.55

16.13 Cutting road and making good the same including supply of extra quantities of materials i.e. aggregate, moorum screening, red bajri and labour required. 16.13.1

16.13.1 bituminous portion

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.08cum. (road 6 metres wide, 0.6 metre length wise and 0.30m (average depth) volume =• 1.08 cum).				
	Material				
	Supplying and stacking stone aggregate 53mm to 24mm nominal size at site.				
	(A) (Rate as per item No 16.3.8)	cum	0.09	810.55	72.95
	(A) Supplying and stacking red bajri at site (Rate as per item No. 16.3.8)	cum	0.023	654.15	15.05
	(A) Supplying and stacking moorum at site (Rate as per item No. 16.3.10)	cum	0.022	421.85	9.28
2911	Stone chipping 11.2mm size	cum	0.092	700.00	64.40
2202	Carriage of aggregate	cum	0.092	53.21	4.90
0309	Paving Bitumen A-90 or S-90	tonne	0.011	22,500.00	247.50
2211	Carriage	tonne	0.011	53.21	0.59
	Labour				
	For cutting road and taking out soling and metalling including sorting and screening.				
0114	Beldar	Day	0.96	135.25	129.84
0115	Coolie	Day	0.48	135.25	64.92
	Relaying soling stone 3.6x0.15=0.54cum.				
0114	Beldar	Day	0.24	135.25	32.46
0115	Coolie	Day	0.24	135.25	32.46
	Relaying road metal with extra quantity and consolidation to 0.10m, thickness 3.6x0.10=0.36cum.				
0114	Beldar	Day	0.71	135.25	96.03
0115	Coolie	Day	0.48	135.25	64.92
0101	Bhishti	Day	0.10	138.45	13.84
	Painting two coats, 3.6sqm. including labour for spreading grit				
0114	Beldar	Day	0.48	135.25	64.92
0115	Coolie	Day	0.48	135.25	64.92
9999	Barrier, chowkidar, sprayman, mate, etc.	L.S.	40.43	1.00	40.43
	TOTAL				1,019.41
	Add 1 % for water charges on all except 'A'				9.22
	TOTAL				1,028.63
	Add 15% for contractor's profit and overheads on all except 'A'				139.70
	Cost for 1.08 cum.				1,168.33
	Cost per cum.				1,081.79
	Say				1,081.80

16.13 Cutting road and making good the same including supply of extra quantities of materials i.e. aggregate, moorum screening, red bajri and labour required.

16.13.2 Water bound macadam.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 0.90cum. Consider a road 6 metres wide and 0.6m.				

Code	Description	Unit	Quantity	Rate	Amount
	lengthwise and 0.25m cm average depth =0.90cum.				
	Material				
	Supplying and stacking stone aggregate 53mm to 22 mm nominal size at site.				
A	(Rate as per item No. 16.3.3)	cum	0.09	810.55	72.95 (A)
	Supplying and stacking red bajri at site				
A	(Rate as per item No. 16.3.8)	cum	0.023	654.15	15.05 (A)
	Supplying and stacking moorum at site.				
A	(Rate as per item No. 16.3.10)	cum	0.022	421.85	9.28 (A)
	Labour				
	For cutting road and taking out soling and metalling including sorting and screening.				
0114	Beldar	Day	0.48	135.25	64.92
0115	Coolie	Day	0.24	135.25	32.46
	For relaying soling stone 3.6x0.15=0.54cum.				
0114	Beldar	Day	0.24	135.25	32.46
0115	Coolie	Day	0.24	135.25	32.46
	For relaying road metal with extra quantity and consolidation to 0.10m thickness - 3.6x0.10=0.36cum.				
0114	Beldar	Day	0.48	135.25	64.92
0115	Coolie	Day	0.48	135.25	64.92
0101	Bhishti	Day	0.10	138.45	13.84
9999	Barrier and chowkidar etc.	L.S.	53.82	1.00	53.82
	TOTAL				457.08
	Add 1% for water charges on all except 'A'				3.60
	TOTAL				460.68
	Add 15% for contractor's profit and overheads on all except 'A'				54.51
	Cost for 0.90 cum.				515.19
	Cost per cum.				572.43
	Say				572.45

16.14 Cutting bajri paths and making good the same including supply of extra quantities of brick aggregate, moorum and red bajri required.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm. 10x0.075=0.75cum.				
	Material				
0286	Supplying and stacking 50mm brick aggregate at site(extra quantity)	cum	0.19	355.00	67.45
2260	Carriage	cum	0.19	57.83	10.99
	Supplying and stacking red bajri at site				
	(A) (Rate as per item No. 16.3.8)	cum	0.06	654.15	39.25 (A)
	Supplying and stacking moorum at site				
	(A) (Rate as per item No. 16.3.10)	cum	0.06	421.851	25.31 (A)
	Labour				
	For cutting, sorting out, spreading and consolidation of aggregate				
0114	Beldar	Day	1.60	135.25	216.40
0115	Coolie	Day	0.80	135.25	108.20

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				467.60
	Add 1% for water charges on all except 'A'				4.03
	TOTAL				471.63
	Add 15% for contractor's profit and overheads on all except 'A'				61.06
	Cost for 10 sqm.				532.69
	Cost per sqm.				53.27
	Say				53.25

16.15 Supplying at site :

16.15.1 R.C.C. Standards post/ struts/rails/ pales of mix 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size) with wooden plugs or 6mm bar nibs, wherever required as per direction of Engineer-in-charge cost of earth works in excavation, concrete works to be paid separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 posts = 0.336cum Cubical contents of one post Area bottom A1 =(15+12.5)/2 x8.75+^{1}/2x3.14 x$(6.25)^2$ =120.31+61.38=181.69sqm. Area bottom A2 = (10+7.5)/2 x6.25+'/2x3.14 x$(3.75)^2$ sqm = 54.68+22.08 = 76.76 sqm. $\sqrt{(A_1A_2)}$ = 118.10sqm A1+A2+ $\sqrt{(A1\ A2)}$= 0.03766 sqm Volume = (1.05)/3x0.03766 = 0.01316 cum =0.0132cum. Volume of lower and square portion (16.5x16.5x75)/100x100x100 = 0.0204cum. Total volume = 0.0132+0.0204 cum = 0.0336 cum. Qty. for 10 post = 0.0336x10 = 0.336cum. Cement concrete 1:1.5:3 (1 Cement: 1.5 Coarse sand : 3 graded stone aggregate 12.5mm nominal size) (A) (Rate as per item no 4.1.2)	cum	0.336	3,629.80	1,219.61 (A)
	Extra labour for laying cement concrete in RCC work				
0114	Beldar	Day	0.034	135.25	4.60
0101	Bhishti	Day	0.067	138.45	9.28
0123	Mason 1 st class	Day	0.013	151.50	1.97
0124	Mason 2nd class	Day	0.013	141.60	1.84
0128	Mate	Day	0.013	138.45	1.80
	M.S. Reinforcement 6mm dia. bars 10x4xl.88m = 75.20m+ 10x9x0.50m=45.00m = 120.20m 120.2)m@0.22kg/m =26.44kg. A (Rate as per item No. 5.22.2)	kg	26.44	41.50	1,097.26 (A)
	Centering and shuttering A (Rate as in item no 5.9.1)	sqm	6.99	119.25	833.56 (A)
	6mm C.Plaster 1:2 (1 Cement: 2 fine sand) Details of cost for 9.88 sqm. (0.072)/l 0x9.88 = 0.071				

Code	Description	Unit	Quantity	Rate	Amount
0367	Cement	tonne	0.05	4,500.00	225.00
2209	Carriage	tonne	0.05	47.29	2.36
0983	Fine sand	cum	0.07	320.00	22.40
2261	Carriage	cum	0.07	53.21	3.72
0114	Beldar	Day	0.05	135.25	6.76
0101	Bhishti	Day	0.02	138.45	2.77
0155	Mason	Day	0.64	146.55	93.79
0115	Coolie	Day	0.80	135.25	108.20
0101	Bhishti	Day	0.27	138.45	37.38
9999	Hire and running charges of mixer	L.S	1.95	1.00	1.95
9999	Extra for removing burr, cleaning with wire brushes, pock making with pointed tool etc. complete	L.S	13.26	1.00	13.26
9999	Scaffolding and sundries	L.S	11.57	1.00	11.57
9999	Carriage of RCC posts	L.S	53.82	1.00	53.82
9999	Wooden plugs or 6 mm bar nibs	L.S	12.22	1.00	12.22
9999	Sundries	L.S	13.52	1.00	13.52
	TOTAL				3,778.64
	Add 1% for water charges on all except 'A'				6.28
	Add 15% for contractors profit on all except 'A'				3,784.92
	cost for 0.336 cum				95.17
	cost for one cum				3,880.09
	Say				11,547.90
					11,547.90

16.15 Supplying at site :

16.15.2 Welded steel wire fabric of required width rectangular mesh painted with two or more coats of enamel paint of approved shade over a coat of primer (Painting to be paid for separately.)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 27 sqm.				
	Material				
1021	Steel wire fabric 0.9m wide rectangular mesh 75x25mm size weight not less than 7.75kg/sqm. 30x0.9 = 27sqm.	sqm	27.00	310.00	8,370.00
2314	Carriage of wire 7.75x27=209.25kg=0.209tonne	tonne	0.209	47.29	9.88
	TOTAL				8,379.88
	Add 1% for water charges				83.80
	TOTAL				8,463.68
	Add 15%Tor contractor's profit and overheads				1,269.55
	Cost for 209.25 kg				9,733.23
	Cost per kg.				46.51
	Say				46.50

16.16 Supplying and fixing turn buckles and straining bolts for barbed wire fencing.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one set				
	Material				
1030	Turn buckles	each	1.00	9.00	9.00
1028	Straining bolts	each	1.00	50.00	50.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of turn buckles and straining bolts	L.S.	2.73	1.00	2.73
	Labour for fixing straining bolts and turn buckles				
0103	Blacksmith 2nd class	Day	0.10	141.60	14.16
	TOTAL				75.89
	Add 1% for water charges				0.76
	TOTAL,				76.65
	Add lwo for contractor's profit and overheads				11.50
	Cost per set				88.15
	Say				88.15

16.17 Fencing with R.C.C. post placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire 9.38 kg per 100 metres (min) between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar nibs fixed while casting the post (cost of R.C.C. posts, struts, earth work and concrete to be paid for separately) :- Payment to be made per metre cost of total length of barbed wire used.

16.17.1 With G.I. barbed wire

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30m Material G.I. barbed wire 30x9 = 270m+ 10x6.32 = 63m. = 333.00m.				
1029	333m @9.38kg/100m =31.24kg = 0.31q	quintal	0.31	4 400.00	1 364.00
2314	Carriage	tonne	0.03	47.29	1.42
9999	G.I. staples or binding wire	L.S.	49.40	1.00	49.40
	Labour for fixing costs in line, fixing and stretching wire				
0123	Mason 1st class	Day	0.12	151.50	18.18
0124	Mason 2nd class	Day	0.12	141.60	16.99
0114	Beldar	Day	0.50	135.25	67.62
0102	Blacksmith 1st class	Day	0.50	151.50	75.75
C103	Blacksmith 2nd class	Day	0.50	141.60	70.80
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				1 677.68
	Add 1% for water charges				16.78
	TOTAL				1 694.46
	Add 15% for contractor's profit and overheads				254.17
	Cost for 333m				1 948.63
	Cost per m				5.85
	Say				5.85

16.18 Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire 9.38 kg per 100 m (minimum) between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately):- Payment to be made per metre cost of total length of barbed wire used.

16.18.1 With G.I. barbed wire

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30m				
	Material:				
	G.I. barbed wire				
	30x9 = 270.00m				
	2xl0x(12+32) 1/2 = 63.24 m.				
	= 333.24m				
	333.24m @9.38kg/l00m				
1029	=31.26 kg say 0.31 qtl	quintal	0.31	4,400.00	1,364.00
2314	Carriage of barbed wire supplying & Fixing.	tonne	0.031	47.29	1.47
	Turn buckle & staple				
	(A) (Rate same as per item No. 16.16)	each set	10.00	88.15	881.50 (A)
9999	G.I. staples	L.S.	49.40	1.00	49.40
	Labour for fixing posts in line and fixing and stretching wire:				
0123	Mason 1st class	Day	0.12	151.50	18.18
0124	Mason 2nd class	Day	0.12	141.60	16.99
0114	Beldar	Day	0.50	135.25	67.62
0102	Blacksmith 1st class	Day	0.50	151.50	75.75
0103	Blacksmith 2nd class	Day	0.50	141.60	70.80
	TOTAL				2,545.71
	Add 1% for water charges on all except A				16.64
	TOTAL				2,562.35
	Add 15% for contractor's profit and overheads on all except A				252.13
	Cost for 333.24m				2,814.48
	Cost per m				8.45
	Say				8.45

16.19 Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc.. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 'qunital				
	Material:				
	M.S. angle = 1.00 qtl.				
	Add 5% wastage = 0.05 qtl.				
1007	=1.05 qtl.	quintal	1.05	3100.00	3255.00
2205	Carriage of angle iron	tonne	0.105	47.29	4.97
	Labour				
0103	Blacksmith 2nd class	Day	0.75	141.60	106.20
0114	Beldar	Day	0.50	135.25	67.62
	For spotting, bending of angle and drilling holes etc. :				
0103	Blacksmith 2nd class	Day	1.00	141.60	141.60
0114	Beldar	Day	1.00	135.25	135.25
9999	Sundries such as drilling bit etc.	L.S	19.76	1.00	19.76
	TOTAL				3730.40
	Add 1 % for water charges				37.30
	TOTAL				3767.70
	Add15% for contractor's profit and overheads				565.16
	Cost for 1 qunital				4332.86
	Cost of one kg				43.33
	Say				43.35

16.20 welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x60cm of mix 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40mm nominal size) every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and struts embedded in cement concrete blocks 70x45x50cm of the same mix, provided with welded steel wire fabric fixed between the posts fitted and fixed with G.I. staples on wooden plugs or tied to 6 mm bar nibs with G.I. binding wire (cost of posts, welded steel wire fabric, painting, earth work in excavation and concrete to be paid for separately):

Code	Description	Unit	Quantity	Rate	Amount
	Details of csot for 30'metres i.e.30xl.20=36.00sqm				
	Labour for fixing posts in line fixing and stretching - welded wire fabric :				
0123	Mason 1st class	Day	0.12	151.50	18.18
0124	Mason 2nd class	Day	0.12	141.60	16.99
0114	Beldar	Day	0.50	135.25	67.62
0102	Blacksmith 1 st class	Day	0.50	151.50	75.75
0103	Blacksmith 2nd class	Day	0.50	141.60	70.80
9999	G.I. staple or binding wire	L.S.	53.82	1.00	53.82
9999	Sundries	L.S	53.82	1.00	53.82
	TOTAL				356.98
	Add 1% for water charges				3.57
	TOTAL.				360.55
	Add 15% for contractor's profit and overheads				54.08
	Cost for 36 sqm				414.63
	Cost per sqm				11.52
	Say				11.50

16.21 Engraving letters in hard stone

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 6 letters 8 cm height				
	Labour				
	For Engraving stone-				
0126	Mason (Ornamental work)	Day	0.38	151.50	57.57
9999	Sundries	L.S	6.76	1.00	6.76
	TOTAL				64.33
	Add 1% for water charges				0.64
	TOTAL				64.97
	Add 15% for contractor's profit and overheads				9.75
	Cost of 6 letters of 8cm heights				74.72
	Cost per cm. height per letter				1.56
	Say				1.55

16.22 Providing and fixing 15xl5x90cm boundary stone of hard stone with top 30 cm chisel dressed on all four sides and on top (cost of excavation, refilling and concrete etc. to be paid for separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one stone				
1151	Cost of stone 15x15x90cm with 30cm chisel dress	each	1.00	46.00	46.00

Code	Description	Unit	Quantity	Rate	Amount
	Labour for fixing				
0114	Beldar	Day	0.12	135.25	16.23
9999	Carriage to site	L.S	4.16	1.00	4.16
	TOTAL				66.39
	Add 1% for water charges				0.66
	TOTAL				67.05
	Add 15% for contractor's profit and overheads				10.06
	Cost of each.				77.11
	Say				77.10

16.23 Providing and fixing 15cm dia at top 20cm at bottom and 90cm high precast reinforced cement concrete 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size) boundary stone as per standard design including finishing smooth with cement mortar 1:3 (1 cement: 3 fine sand) (cost of excavation, refilling and concreting to be paid for separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one stone				
	(i) Cement concrete 1.1.5:3 (l cement :1.5 course sand :3 graded stone aggregate 20mm nominal size)				
	L/3 [A1+A2$\sqrt{(A1A2)}$ = 0.825/3 x (0.09522^2+ 0.0752^2 + 0.75x0.095)x3.142 =0.0186 (A)				
	Semi Circle-				
	l/2x4/ 3x22/7x(0.075)3=0.0010 –(B)/ 0.0196 (A+B) Say 0.02cum.				
	Rate as per item no 4.1.2	cum	0.02	3629.80	72.60 (A)
	(ii) Extra for laying cement concerte in RCC work				
0114	Beldar	Day	0.002	135.25	0.27
0101	Bhishti	Day	0.004	138.45	0.55
0123	Mason 1st class	Day	0.0008	151.50	0.12
0124	Mason 2nd class	Day	0.0008	141.60	0.11
0128	Mate	Day	0.0008	138.45	0.11
	(iii) M.S. reinforcement-				
	6mm dia. bar				
	5.99 metre =5.99x0.22 =1.32kg.				
	(Rate as per item No 5.22.1	kg	1.32	41.50	54.78 (A)
	(iv) Centering and shuttering				
	1/2x3.142 (0.19+0.15)x0.825 =0.441 + 3.142/4(0.19)^2=0028				
	1/2x4x3.142(0.075)^2 = 0.035				
	= 0.504				
	Say0.50sqm.				
	(Rate as per item 5.9.1)	sqn	0.50	119.25	59.62 (A)
	(v) 6mm cement plaster 1:3 (1 Cement :3 fine sand)-				
	1/2x3.142 (0.19+0.15)x0.825 =0.44 + π/4 (0-19)^2 =0.028				
	1/2x4x3.142(0.075)^2 = 0.035				
	= 0.504				
	Say 0.50sqm.				
0367	Cement	tonne	0.0018	4500.00	8.10
2209	Carriage of cement	tonne	0.0018	47.29	0.09
0983	Fine sand	cum	0.0385	320.00	12.32
2261	Carriage of fine sand	cum	0.0385	53.21	2.05
	Labour for mortar				

Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	0.0027	135.25	0.37
0101	Bhishti	Day	0.0002	138.45	0.03
9999	Hire and running charges of mixer	L.S	0.10	1.00	0.10
9999	Sundries	L.S	0.05	1.00	0.05
	Labour for plaster				
0155	Mason	Day	0.026	146.55	3.81
0115	Coolie	Day	0.038	135.25	5.14
0101	Bhishti	Day	0.046	138.45	6.37
9999	Extra for removing burr	L.S	0.68	1.00	0.68
9999	Scaffolding, sundries etc.	L.S	0.60	1.00	0.60
	(vi) Labour for fixing				
0114	Beldar	Day	0.12	135.25	16.23
9999	Carriage to site	L.S	4.16	1.00	4.16
	TOTAL				248.26
	Add 1% for water charges on all except A				0.61
	TOTAL				248.87
	Add 15% for contractor's profit and overheads on all except A				9.28
	Cost of each				258.15
	Say				258.15

16.24 Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size) kilometre stone as per standard design including finishing smooth in 1:3 cement mortar (1 cement: 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately.

16.24.1 35x111x25 cm size.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) in Kilometre stone 0.35x0.25x0.835m = 0.073 0.37x0.27x0.10m = 0.010 1/2x22/7x(0.175) x0.25m = 0.012 Total = 0.095cum Say 0.10 cum				
	Rate as per item no 4.1.2 of S.H. Concrete Work.	cum	0.10	3 629.80	362.98 (A)
	(ii) Extra for laying cement concrete in RCC work				
0114	Beldar	Day	0.01	135.25	1.35
0101	Bhishti	Day	0.02	138.45	2.77
0123	Mason 1 st class	Day	0.004	151.50	0.61
0124	Mason 2nd class	Day	0.004	141.60	0.57
0128	Mate	Day	0.004	138.45	0.55
	(iii) M.S. reinforcement- O.lOcum @48.06kg/cum. =4.806kg. Say 4.81kg.				
	Rate as Per item No.5.22.1 of S.H.R.C.C.)	kg	4.81	41.50	199.61(A)
	(iv) Centering and shuttering- (0.35+2x0.25)x0.835 = 0.710 sqm 0.35x0.25 = 0.088sqm (0.37+2x0.27)x0.10 = 0.091sqm 2x0.37x0.01 =.0.007 sqm				

Code	Description	Unit	Quantity	Rate	Amount
	2x2x0.25x0.01=0.010sqm 1/2x3.142/4x(0.35)^2= 0.048sqm 1/2x0.35x0.25x3.142 = 0.138sqm. = 1. 092sqm say 1.09 sqm of				
	(Rate'as per item No.5.9.1 S.H.R.C.C.)	sqm	1.09	119.25	129.98 (A)
	(v) 6mm cement plaster 1:3 (1 Cement :3 fine sand)- Qty. as per centering and shuttering = 1.092sqm 0.35x0.835 = 0.292sqm 0.37x0.10 = 0.037sqm 1/2x3.142/4x(0.35)^2= 0.048sqm 2x0.37x0.01 = 0.007 sqm = 1.476 sqm Say 1.48 sqm				
0367	Cement	tonne	0.054	4500.00	243.00
2209	Carriage of cement	tonne	0.054	47.29	2.55
0983	Fine sand	cum	0.011	320.00	3.52
2261	Carrige of fine sand	cum	0.011	53.21	0.59
	Labour for mortar				
0114	Beldar	Day	0.008	135.25	1.08
0101	Bhishti	Day	0.0007	138.45	0.10
9999	Hire and running charges of mixer	L.S.	0.03	1.00	0.03
9999	Sundries	L.S.	0.13	1.00	0.13
	Labour for plaster				
0155	Mason	Day	0.075	146.55	10.99
0115	Coolie	Day	0.111	135.25	15.01
0101	Bhishti	Day	0.136	138.45	18.83
9999	Extra for removing burr	L.S.	1.95	1.00	1.95
9999	Scaffolding, sundries etc.	L.S	1.82	1.00	1.82
	(vi) Labour for fixing				
0114	Beldar	Day	0.20	135.25	27.05
9999	Carriage to site	L.S	13.52	1.00	13.52
	TOTAL				1,038.59
	Add 1% for water charges on all except A				3.46
	TOTAL				1,042.05
	Add15% for contractor's profit and overheads on all except A				52.42
	Cost per stone				1,094.47
	Say				1,094.45

16.24 Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size) kilometre stone as per standard design including finishing smooth in 1:3 cement mortar (1 cement: 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately.

16.24.2 50x152.5x25 cm size.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement: 1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) 0.50x0.25x1.145m = 0.143cum. + 0.52x0.27x0.13m = 0.018cum. + l/2x22/7x(0.25)2x0.25m = 0.025cum. = 0.186 cum. Say0.19cum.				

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no 4.1.2 of S.H. Concrete Work.	cum	0.19	3,629.80	689.66 (A)
	(ii) Extra for laying cement concrete in RCC work				
0114	Beldar	Day	0.019	135.25	2.57
0101	Bhishti	Day	0.038	138.45	5.26
0123	Mason 1st class	Day	0.008	151.50	1.21
0124	Mason 2nd class	Day	0.008	141.60	1.13
0128	Mate	Day	0.008	138.45	1.11
	(iii) M.S. reinforcement- 0.19cum @48.06kg/cum. =9.131kg. Say 9.13 kg.				
	(Rate as per item No.5.22.1 of S.H.R.C.C.)	kg	9.13	41.50	378.90 (A)
	(iv) Centering and shuttering- (0.50+2x0.25)xl.l45 = 1.145 sqm l/2x(0.25)^2 3.142 = 0.098 3.142(0.25)x0.25=0.196 (0.52+2x0.27)x0.13 =0.138 2x0.52x0.01 =0.10 2x2x0.25x0.01 =0.010 1x0.50x0.25=0.125 = 1.722sqm. Say 1.72 sqm				
	(Rate as per item No.5.9.1 of S.H.R.C.C.)	sqm	1.72	119.25	205.11 (A)
	(v) 6mm cement plaster 1:3 (1 Cement :3 fine sand)- Qty. as per centering and shuttering = 1.722sqm. + 0.50x1.145 = 0.572 + 0.52x0.13 ,=_0.068sqm.+ l/2x(0.25)^2 x3.142 = 0.098 + 2x0.52x001 =0.010 = 2.470sqm Sq. 2.47 sqm.				
0367	Cement	tonne	0.09	4,500.00	405.00
2209	Carriage of cement	tonne	0.09	47.29	4.26
0983	Fine sand	cum	0.20	320.00	64.00
2261	Carriage of fine sand	cum	0.20	53.21	10.64
	Labour for mortar				
0114	Beldar	Day	0.013	135.25	1.76
0101	Bhishti	Day	0.001	138.45	0.14
9999	Hire and running charges of mixer	L.S	0.52	1.00	0.52
9999	Sundries	L.S	0.26	1.00	0.26
	Labour for plaster				
0155	Mason	Day	0.126	146.55	18.47
0115	Coolie	Day	0.185	135.25	25.02
0101	Bhishti	Day	0.227	138.45	31.43
9999	Extra for removing burr	L.S.	3.38	1.00	3.38
9999	Scaffolding, sundries etc.	L.S	2.86	1.00	2.86
	(vi) Labour for fixing				
114	Beldar	Day	0.20	135.25	27.05
9999	Carriage to site	L.S	13.52	1.00	13.52
	TOTAL				1893.26
	Add 1% for water charges on all except A				6.20
	TOTAL				1899.46
	Add 15% for contractor's profit and overheads on all except A				93.87
	Cost per stone				1993.33
	Say				1993.35

16.24 Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size) kilometre stone as per standard design including finishing smooth in 1:3 cement mortar (1 cement: 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately.

16.24.3 35x93.5x18 cm size.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one stone (i) Cement concrete 1:1.5:3 (1 cement :1.5 Coarse sand :3 graded stone aggregate 20mm nominal size) 0.35x0.18x0.835m = 0.0526 cum. + 0.37x0.20x0.10m = 0.0074 cum. = 0.060 cum.				
	Rate as per item no.4.1.2 of S.H. Concrete Work.	cum	0.06	3629.80	217.79 (A)
	(ii) Extra for laying cement concrete in RCC work				
0114	Beldar	Day	0.006	135.25	0.81
0101	Bhishti	Day	0.012	138.45	1.66
0123	Mason 1 st class	Day	0.0024	151.50	0.36
0124	Mason 2nd class	Day	0.0024	141.60	0.34
0128	Mate	Day	0.0024	138.45	0.33
	(iii) M.S. reinforcement- 0.06cum @48.06kg/cum. =2.8836 kg. Say 2.88 kg.				
	(Rate as per item No. 5.22.1 of S.H.R.C.C.)	kg	2.88	41.50	119.52 (A)
	(iv) Centering and shuttering- (0.35+2x0.18)x0.835 = 0.593 sqm (0.37+2x0.20)x0.10 = 0.077 sqm 2x0.35x0.18 = 0.126 sqm 2x0.37x0.01 =0.007sqm 2x2x0.18x0.01 =0.007sqm = 0.810 sqm				
	(Rate as per item No.5.9.1 S.H.R.C.C.)	sqm	0.81	119.25	96.59 (A)
	(v) 6mm cement plaster 1:3(1 Cement :3 fine sand)- Qty. as per centering and shuttering = 0.810sqm 0.35x0.835 = 0.292sqm 0.37x0.10 =0.037sqm 2x0.37x0.01 =0.007sqm = 1.146 sqm Say 1.15sqm				
0367	Cement	tonne	0.042	4500.00`	189.00
2209	Carriage of cement	tonne	0.042	47.29	1.99
0983	Fine sand	cum	0.009	320.00	2.88
2261	Carriage of fine sand	cum	0.009	53.21	0.48
	Labour for mortar				
0114	Beldar	Day	0.006	135.25	0.81
0101	Bhishti	Day	0.0006	138.45	0.08
9999	Hire and running charges of mixer	L.S	0.26	1.00	0.26
9999	Sundries	L.S	0.13	1.00	0.13
	Labour for plaster				
0155	Mason	Day	0.058	146.55	8.50
0115	Coolie	Day	0.086	135.25	11.63

Code	Description	Unit	Quantity	Rate	Amount
0101	Bhishti	Day	0.105	138.45	14.54
9999	Extra for removing burr	L.S	1.56	1.00	1.56
9999	Scaffolding, sundries etc.	L.S	1.30	1.00	1.30
	(vi) Labour for fixing				
0114	Beldar	Day	0.10	135.25	13.52
9999	Carriage to site	L.S	13.52	1.00	13.52
	TOTAL				697.60
	Add 1% for water charges on all except 'A'				2.64
	TOTAL				700.24
	Add 15% for contractor's profit and overheads on all except 'A'				39.95
	Cost of each				740.19
	Say				740.20

16.25 Surface dressing on new surface with paving bitumen of grade A -90/S-90 of approved quality using 2.25 Kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sem of road surface including consolidation with road roller of 6 to 8 tonne capacity etc. complete:

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	Bitumen S-90@2.25kg per sqm. =225 kg = 0.225 tonne.				
0309	Bitumen S-90 @ 2.25kg per sqm. =225kg. = 0.225tonne	tonne	0.225	22 500.00	5 062.50
2211	Carriage of bitumen	tonne	0.225	53.21	11.97
	Stone aggregate 13.2mm nominal size @1.65cum. per lOOsqm.				
2910	Stone chippings 13.2mm	cum	1.65	700.00	1 155.00
2202	Carriage of stone aggregate	cum	1.65	53.21	87.80
0370	Steam coal for heating bitumen @2 qunital per tonne of bitumen = 2x0.225=0.450q	quintal	0.45	300.00	135.00
2200	Carrige of steam coal	tonne	0.045	60.81	2.74
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) For cleaning:				
0128	Mate	Day	0.11	138.45	15.23
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating and spraying bitumen :				
0130	Mistry	Day	0.08	151.50	12.12
0138	Spray man	Day	0.11	138.45	15.23
0114	Beldar	Day	0.93	135.25	125.78
	(c) For screening and spreading aggregate :				
0128	Mate	Day	0.11	138.45	15.23
0114	Beldar	Day	0.93	135.25	125.78
0115	Coolie	Day	1.55	135.25	209.64
	(d) Consolidation Charges				
0113	Chowkidar (at barriers for night watch and for road roller)	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1 000.00	110.00
0001	Hire charges for boiler	Day	0.12	595.00	71.40
0007	Hire charges for tar sprayer unit	Day	0.11	250.00	27.50

Code	Description	Unit	Quantity	Rate	Amount
1235	Diesel for road roller @ 18 litres	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				7,695.61
	Add 1 % for water charges				76.96
	TOTAL				7,772.57
	Add 15% for contractor's profit and overheads				1,165.89
	Cost for 100 Sqm.				8,938.46
	Cost per Sqm.				89.38
	Say				89.40

16.26 Surface dressing on new surface in two coats with bitumen of grade A-90/S-90 of approved quality using 1.8kg.of bitumen per sqm with 1.5cum of stone chippings 13.2mm nominal size per 100 sqm of road surface for first coat and 1.1kg. of bitumen per sqm. with 1.00 cu. metre of stone chippings 11.2mm nominal size per 100 sqm. of road surface for second coat including consolidation of each coat separately with road roller of 6 to 8 tonne capacity etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
0309	Bitumen S-90/A-90 @ 1.8kg/sqm.=180kg.=0.18 tonne	tonne	0.18	22,500.00	4,050.00
2211	Carriage of bitumen	tonne	0.18	53.21	9.58
2910	Stone chippings 13.2mm nominal size @1.5cum. per lOOsqm.	cum	1.50	700.00	1,050.00
2202	Carriage of stone aggregate	cum	1.50	53.21	79.82
0370	Steam coal for heating bitumen @2 qunital per tonne	quintal	0.36	300.00	108.00
2200	Carriage of steam coal	tonne	0.036	60.81	2.19
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) For cleaning:				
0128	Mate	Day	0.11	138.45	15.23
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating and spraying bitumen :				
0130	Mistry	Day	0.08	151.50	12.12
0138	Sprayman	Day	0.11	138.45	15.23
0114	Beldar	Day	1.38	135.25	186.64
	(c) For screening and spreading aggregate :				
0128	Mate	Day	0.27	138.45	37.38
0114	Beldar	Day	0.85	135.25	114.96
0115	Coolie	Day	0.85	135.25	114.96
	(d) Consolidation Charges				
0113	Chowkidar	Day	0.11	135.25	14.88
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
0001	Hire charges for boiler	Day	0.12	595.00	71.40
0007	Hire charges for tar sprayer unit	Day	0.11	250.00	27.50

Code	Description	Unit	Quantity	Rate	Amount
1235	Diesel for road roller @ 18 litres/day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	16.38	1.00	16.38
	Second Coat				
	Details of cost for 100 sqm.				
0309	Bitumen S-90/A-90 @ 1.10kg per sqm.= l 10kg.=0.11 tonne	tonne	0.11	22,500.00	2,475.00
2911	Stone chippings 10mm/11.2mm	cum	1.00	700.00	700.00
2211	Carriage of bitumen	tonne	0.11	53.21	5.85
2202	Carriage of aggregate	cum	1.00	53.21	53.21
0370	Steam coal for heating bitumen @2 qunital per tonne of bitumen	quintal	0.22	300.00	66.00
2200	Carriage of steam coal	tonne	0.022	60.81	1.34
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate				
	(a) For cleaning and brushing loose chips:				
0128	Mate	Day	0.06	138.45	8.31
0115	Coolie	Day	0.97	135.25	131.19
	(b) For heating and spraying bitumen :				
0130	Mistry	Day	0.05	151.50	7.58
0138	Sprayman	Day	0.07	138.45	9.69
0114	Beldar	Day	0.75	135.25	101.44
	(c) For screening and spreading aggregate :				
0128	Mate	Day	0.07	138.45	9.69
0114	Belder	Day	0.62	135.25	83.86
0115	Coolie	Day	0.62	135.25	83.86
	(d) Consolidation Charges				
0113	Chowkidar(at barrier for night watch and for road roller)	Day	0.15	135.25	20.29
0101	Bhishti	Day	0.06	138.45	8.31
0003	Hire charges of road roller	Day	0.06	1,000.00	60.00
0007	Hire charges for tar sprayer unit	Day	0.07	250.00	17.50
1235	Diesel for road roller @ 18 litres	litre	1.08	30.25	32.67
9999	Carriage of diesel	L.S.	1.43	1.00	1.43
0001	Hire charges of boiler	Day	0.06	595.00	35.70
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.03	15.00	0.45
0365	Soft brushes	each	0.09	12.00	1.08
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				10,429.62
	Add 1% for water charges				104.30
	TOTAL				10,533.92
	Add 15% for contractor's profit and overheads				1,580.09
	Cost for two coats per 100 sqm.				12,114.01
	Cost per Sqm.				121.14
	Say				121.15

16.27 : Surface dressing on old surface with hot bitumen of grade A-90/ S-90 of approved quality using 1.95 kg of bitumen per sqm. with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
	Material:				
0309	Bitumen 1.95kg./sqm.= 195kg. or 0.195t	tonne	0.195	22,500.00	4,387.50
2911	Stone chippings 11.2mm nominal size @ 1.50cum. per 100 sqm.	cum	1.50	700.00	1,050.00
2211	Carriage of bitumen	tonne	0.195	53.21	10.38
2202	Carriage of aggregate	cum	1.50	53.21	79.82
0370	Steam coal for heating bitumen @2 quintal per tonne of bitumen	quintal	0.39	300.00	117.00
2200	Carriage of steam coal	tonne	0.039	60.81	2.37
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate etc.				
	(a) For cleaning:				
0128	Mate	Day	0.06	138.45	8.31
0114	Beldar	Day	0.49	135.25	66.27
0115	Coolie	Day	0.97	135.25	131.19
	(b) For heating and spraying bitumen :				
0130	Mistry	Day	0.05	151.50	7.58
0138	Sprayman	Day	0.06	138.45	8.31
0114	Beldar	Day	0.69	135.25	93.32
	(c) For screening and spreading aggregate :				
0128	Mate	Day	0.66	138.45	91.38
0114	Beldar	Day	0.51	135.25	68.98
0115	Coolie	Day	0.51	135.25	68.98
	(d) Consolidation Charges				
0113	Chowkidar	Day	0.15	135.25	20.29
0101	Bhishti	Day	0.06	138.45	8.31
0003	Hire charges of road roller	Day	0.06	1,000.00	60.00
1235	Diesel for road roller @ 18 litres per day	litre	1.08	30.25	32.67
9999	Carriage of diesel	L.S.	1.43	1.00	1.43
0007	Hire charges for tar sprayer	Day	0.06	250.00	15.00
0001	Hire charges of boiler	Day	0.06	595.00	35.70
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Brooms and gunny bags	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	5.33	1.00	5.33
	TOTAL				6,375.04
	Add 1% for water charges				63.75
	TOTAL				6,438.79
	Add 15% for contractor's profit and overheads				965.82
	Cost for 100 sqm.				7,404.61
	Cost per Sqm.				74.05
	Say				74.05

16.28 Surface dressing one coat on new surface with bitumen of specified grade at a rate of 1.95 kg/sqm. of surface area with 1.5 cum. of stone chippings 13.2 mm nominal size per 100 sqm. of road surface including consolidation with road roller of 6 to 8 tonne capacity , etc. complete :

16.28.1 Using bitumen emulsion (minimum 50% bitumen content - RS grade conforming to IS : 8887).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm,				
0310	Bitumen emulsion	tonne	0.195	19,500.00	3,802.50
2211	Carriage of bitumen	tonne	0.195	53.21	10.38
2910	Stone chippings 13.2mm @1.50 cum. per 100 sqm. = 1.50cum.	cum	1.50	700.00	1,050.00
2202	Carriage of stone aggregate	cum	1.50	53.21	79.82
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.11	138.45	15.23
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For Spraying bitumen emulsion :				
0130	Mistry	Day	0.07	151.50	10.60
0 138	Sprayman	Day	0.10	138.45	13.84
0114	Beldar	Day	1.00	135.25	135.25
	(c) For screening and spreading aggregate :				
0128	Mate	Day	0.11	138.45	15.23
0114	Beldar	Day	0.85	135.25	114.96
0115	Coolie	Day	0.85	135.25	114.96
	(d) Consolidation Charges				
0113	Chowkidar	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.27	138.45	37.38
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
0007	Hire charges for tar sprayer	Day	0.10	250.00	25.00
1235	Diesel for road roller @ 18 litres per day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				6,035.34
	Add 1% for water charges				60.35
	TOTAL				6,095.69
	Add 15% for contractor’s profit and overheads				914.35
	Cost for 100 sqm.				7,010.04
	Cost per Sqm.				70.10
	Say				70.10

16.29 Surface dressing one coat on old surface with bitumen of specified grade at the rate of 1.22 kg/ sqm of surface area with 1.10 cum of stone chippings 11.2 mm nominal size per 100 sqm. of road surface including consolidation with road roller of 6 to 8 tonne capacity etc. complete :

16.29.1 Using bitumen emulsion (minimum 50% bitumen content - RS grade conforming to IS : 8887).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm				
0310	Bitumen emulsion @1.22 kg per Sqm. =122 kg. or 0.122 tonne	tonne	0.122	19,500.00	2,379.00
2211	Carriage of bitumen emulsion	tonne	0.122	53.21	6.49
2911	Stone chippings 11.2mm nominal size @ 1.10cum. per 100 sqm.	cum	1.10	700.00	770.00
2202	Carriage of stone chippings	cum	1.10	53.21	58.53
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.06	138.45	8.31
0114	Beldar	Day	0.49	135.25	66.27
0115	Coolie	Day	0.97	135.25	131.19
	(b) For Spraying bitumen emulsion :				
0130	Mistry	Day	0.05	151.50	7.58
0138	Sprayman	Day	0.06	138.45	8.31
0114	Beldar	Day	0.63	135.25	85.21
	(c) For screening and spreading aggregate :				
0128	Mate	Day	0.07	138.45	9.69
0114	Beldar	Day	0.62	135.25	83.86
0115	Coolie	Day	0.62	135.25	83.86
	(d) Consolidation Charges				
0113	Chowkidar	Day	0.15	135.25	20.29
0101	Bhishti	Day	0.15	138.45	20.77
0003	Hire charges of road roller	Day	0.06	1000.00	60.00
0007	Hire charges for tar sprayer	Day	0.06	250.00	15.00
1235	Diesel for road roller @ 18 litres per day	litre	1.08	30.25	32.67
9999	Carriage of diesel	L.S.	1.43	1.00	1.43
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire brush (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	5.33	1.00	5.33
	TOTAL				3,862.01
	Add 1% for water charges				38.62
	TOTAL				3,900.63
	Add 15% for contractor's profit and overheads				585.09
	Cost for 100 sqm.				4,485.72
	Cost per Sqm.				44.86
	Say				44.85

16.30 Providing and applying tack coat using hot straight run bitumen of grade 80/ 100 including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :

16.30.1 On W.B.M. @ 0.75 Kg / sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00sqm				
2916	Bitumen 80/100	tonne	0.075	22,500.00	1,687.50
2211	Carriage of bitumen	tonne	0.075	53.21	3.99
0370	Steam coal	quintal	0.15	300.00	45.00
2200	Carriage of steam coal	tonne	0.015	60.81	0.91
	Materials for cleaning the road surface :				
0364	Wire brush (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Gunny bags	L.S.	7.80	1.00	7.80
0007	Spray unit	Day	0.03	250.00	7.50
9999	Sundries	L.S.	9.10	1.00	9.10
	Labour:				
	(a) For cleaning:				
0128	Mate	Day	0.06	138.45	8.31
0114	Beldar	Day	1.46	135.25	197.46
	(b) For heating bitumen:				
0114	Beldar	Day	0.19	135.25	25.70
	(c) For applying tack coat:				
0114	Beldar	Day	0.47	135.25	63.57
	TOTAL				2,059.03
	Add 1% for water charges				20.59
	TOTAL				2,079.62
	Add 15% for contractor's profit and overheads				311.94
	Cost for 100 sqm.				2,391.56
	Cost per Sqm.				23.92
	Say				23.90

16.30 Providing and applying tack coat using hot straight run bitumen of grade 80/100 including heating bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :

16.30.2 On bituminous surface @ 0.50 Kg/sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00sqm				
2916	Bitumen 80/100	tonne	0.05	22,500.00	1,125.00
2211	Carriage of bitumen	tonne	0.05	53.21	2.66
0370	Steam coal	quintal	0.10	300.00	30.00
2200	Carriage of steam coal	tonne	0.01	60.81	0.61
	Materials for cleaning the road surface :				
0364	Wire brush (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Gunny bags	L.S.	7.80	1.00	7.80
0007	Spray unit	Day	0.03	250.00	7.50
9999	Sundries	L.S.	7.80	1.00	7.80
	Labour:				
	(a) For cleaning:				
0128	Mate	Day	0.06	138.45	8.31
0114	Beldar	Day	1.46	135.25	197.46

Code	Description	Unit	Quantity	Rate	Amount
	(b) For heating bitumen:				
0114	Beldar	Day	0.19	135.25	25.70
	(c) For applying tack coat:				
0114	Beldar	Day	0.47	135.25	63.57
	TOTAL				1,478.60
	Add 1% for water charges				14.79
	TOTAL				1,493.39
	Add 15% for contractor's profit and overheads				224.01
	Cost for 100 sqm.				1,717.40
	Cost per Sqm.				17.17
	Say				17.15

16.31 Providing and applying tack coat using bitumen emulsion (Rapid Setting) complying with IS 8887-1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specifications:

16.31.1 On W.B.M @ 0.4kg/sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
7382	bitumen emulsion (R.S.)	tonne	0.04	32,000.00	1,280.00
2211	Carriage of bitumen	tonne	0.04	53.21	2.13
	Materials for cleaning the road surface :				
0364	Wire brush (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Gunny bags	L.S.	7.80	1.00	7.80
0007	Spray unit	Day	0.03	250.00	7.50
9999	Sundries	L.S.	9.10	1.00	9.10
	Labour:				
	(a) For cleaning:				
0128	Mate	Day	0.06	138.45	8.31
0114	Beldar	Day	1.46	135.25	197.46
	(c) For applying tack coat:				
0114	Beldar (0.47/0.075)x0.04=0.25	Day	0.25	135.25	33.81
	TOTAL				1,548.30
	Add 1% for water charges				15.48
	TOTAL				1,563.78
	Add 15% for contractor's profit and overheads				234.57
	Cost for 100 sqm.				1,798.35
	Cost per Sqm.				17.98
	Say				18.00

16.31 Providing and applying tack coat using bitumen emulsion (Rapid Setting) complying with IS 8887-1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specifications:

16.31.2 On bituminous surface @ 0,25kg/sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
7382	bitumen emulsion (R.S.)	tonne	0.025	32,000.00	800.00
2211	Carriage of bitumen	tonne	0.025	53.21	1.33

Code	Description	Unit	Quantity	Rate	Amount
	Materials for cleaning the road surface :				
0364	Wire brush (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Gunny bags	L.S.	7.80	1.00	7.80
0007	Spray unit	Day	0.03	250.00	7.50
9999	Sundries	L.S	7.80	1.00	7.80
	Labour:				
	(a) For cleaning:				
0128	Mate	Day	0.061	138.45	8.31
0114	Beldar	Day	1.46	135.25	197.46
	(c) For applying tack coat:				
0114	Beldar (0.47/0.050)x0.025=0.235	Day	0.235	135.25	31.78
	TOTAL				1,064.17
	Add 1% for water charges				10.64
	TOTAL,				1,074.81
	Add 15% for contractor's profit and overheads				161.22
	Cost for 100 sqm.				1,236.03
	Cost per Sqm.				12.36
	Say				12.35

16.32 2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete: (tack coat to be paid for separately).

16.32.1 With paving Asphalt 80/100 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm. Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings.				
2916	Bitumen :52xl.8+56x0.9=144kg. or 0.144 tonne.	tonne	0.144	22,500.00	3,240.00
2211	Carriage of bitumen	tonne	0.144	53.21	7.66
2914	Solvent 70gms/kg. for 0.144 t = 10.08kg.	kilogram	10.08	18.00	181.44
2342	Carriage of solvent	quintal	0.10	5.32	0.53
2910	Stone chippings 13.2mm nominal size @1.80cum. per 100 sqm.	cum	1.80	700.00	1,260.00
2911	Stone chippings 11.2mm nominal size @0.90cum. per 100 sqm.	cum	0.90	700.00	630.00
2202	Carriage of aggregate	cum	2.70	53.21	143.67
0370	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen = 2x0.144=0.288q	quintal	0.288	300.00	86.40
2200	Carriage of steam coal	tonne	0.0288	60.81	1.75
	Labour for cleaning the road surface, heating				

Code	Description	Unit	Quantity	Rate	Amount
	and spraying bitumen and aggregate :				
	(a) For cleaning:				
0 128	Mate	Day	0.08	138.45	11.08
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen:				
0114	Beldar	Day	0.57	135.25	77.09
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	5.00	135.25	676.25
	(d) Consolidation Charges				
0113	Chowkidar(at barrier for night watch and for road roller)	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1000.00	110.00
1235	Diesel for road roller @ 18 litres per day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S	2.73	1.00	2.73
0001	Hire charges of boiler	Day	0.13	595.00	77.35
0023	Hire charges for mixer	Day	0.04	200.00	8.00
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				7,055.42
	Add 1% for water charges				70.55
	TOTAL				7,125.97
	Add 15% for contractor’s profit and overheads				1,068.90
	Cost for 100 sqm.				8,194.87
	Cost per Sqm				81.95
	Say				81.95

16.32 2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete: (tack coat to be paid for separately).

16.32.2 With paving Asphalt 60/70 with no solvent

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
	Asphalt 60/70				
	(i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings.				
	(ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings.				
7309	Bitumen :52xl.8+56x0.9=144kg. or 0.144 tonne.	tonne	0.144	23,200.00	3,340.80
2211	Carriage of bitumen	tonne	0.144	53.21	7.66

Code	Description	Unit	Quantity	Rate	Amount
2910	Stone chippings 13.2mm nominal size @1.80cum. per 100sqm.	cum	1.80	700.00	1,260.00
2911	Stone chippings 11.2mm nominal size @0.90cum. per 100sqm.	cum	0.90	700.00	630.00
2202	Carriage of aggregate	cum	2.70	53.21	143.67
0370	Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.144=0.288q	quintal	0.288	300.00	86.40
2200	Carriage of steam coal	tonne	0.0288	60.81	1.75
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.08	138.45	11.08
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen:				
0114	Beldar	Day	0.57	135.25	77.09
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	5.00	135.25	676.25
	(d) Consolidation Charges				
0113	Chowkidar(at barrier for night watch and for road roller)	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
1235	Diesel for road roller @ 18 litres per day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
0001	Hire charges of boiler	Day	0.13	595.00	77.35
0023	Hire charges for mixer	Day	0.04	200.00	8.00
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire brush (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				6,974.25
	Add 1 % for water charges				69.74
	TOTAL				7,043.99
	Add 15% for contractor's profit and overheads				1,056.60
	Cost for 100 sqm.				8,100.59
	Cost per Sqm.				81.01
	Say				81.00

16.32 2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete: (tack coat to be paid for separately).

16.32.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC : SP : 53-1999.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm. Asphalt 80/100				

Code	Description	Unit	Quantity	Rate	Amount
	(i) Hot bitumen @52kg.per cum. of stone chippings 1.8cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of stone chippings 0.90cum. of 11.2mm nominal size chippings.				
7739	Modified Bitumen CRMB - 55 (Refinary produced) :52xl.8+56x0.9=144kg. or 0.144 tonne.	tone	0.144	2,6000.00	3,744.00
2211	Carriage of bitumen	tone	0.144	53.21	7.66
2914	Solvent 70gms/kg. for 0.144 t = 10.08kg.	Kilogram	10.08	18.00	181.44
2342	Carriage of solvent	quintal	0.10	5.32	0.53
2910	Stone chippings 13.2mm nominal size @1.80cum. per 100sqm.	cum	1.80	700.00	1,260.00
2911	Stone chippings 11.2mm nominal size @0.90cum. per 100sqm.	cum	0.90	700.00	630.00
2202	Carriage of aggregate	cum	2.70	53.21	143.67
0370	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.144=0.288q	quintal	0.288	300.00	86.40
2200	Carriage of steam coal	tonne	0.0288	60.81	1.75
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate : (a)For cleaning:				
0128	Mate	Day	0.08	138.45	11.08
0114	Beldar	Day	1.40	135.25	189.25
0115	Coolie	Day	1.40	135.25	189.35
	(b)For heating bitumen:				
0114	Beldar	Day	0.57	135.25	77.09
	(c)For screening and spreading premixed aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	5.00	135.25	676.25
	(d)Consolidation Charges				
0113	Chowkidar(at barrier for night watch and for road roller)	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
1235	Diesel for road roller @ 18 litres per day	liter	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
0001	Hire charges of boiler	Day	0.13	595.00	77.35
0023	Hire charges for mixer	Day	0.04	200.00	8.00
	(e)Misc:				
0364	Brushes etc. for cleaning, Wire brush (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				7,559.42
	Add 1% for water charges				75.59
	TOTAL				7,635.01
	Add 15% for contractor’s profit and overheads				1,145.25
	Cost for 100 sqm				8,780.26
	cost per sqm				87.80
	Say				87.80

16.33 2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2mm and 11.2mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete, (tack coat to be paid for separately):

16.33.1 With paving Asphalt 80/100 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm. Paving Asphalt 80/100' (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of aggregate @ 1.12cum. of 11.2mm nominal size.				
2916	Bitumen :52x2.25+56x1.12= 180kg.	tonne	0.18	2,2500.00	4,050.00
2914	Solvent 0.07x180=12.60kg.	kilogram	12.60	18.00	226.80
2211	Carriage of bitumen	tonne	0.18	53.21	9.58
2342	Carriage of solvent	quintal	0.126	5.32	0.67
2910	Stone chippings 13.2mm nominal size @1.80cum. per 100 sqm.	cum	2.25	700.00	1575.00
2911	Stone chippings 11.2mm nominal size @0.90cum. per 100 sqm.	cum	1.12	700.00	784.00
2202	Carriage of aggregate 2.25+1.12=3.37 cum.	cum	3.37	53.21	179.32
0370	Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	quintal	0.36	300.00	108.00
2200	Carriage of steam coal	tonne	0.036	60.81	2.19
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate : (a) For cleaning:				
0128	Mate	Day	0.08	138.45	11.08
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen:				
0114	Beldar	Day	0.71	135.25	96.03
	(c) For screening and spreading premixed aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	6.25	135.25	845.31
	(d) Consolidation Charges				
0113	Chowkidar	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
1235	Diesel for road roller @ 18 litres	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
0001	Hire charges of boiler	Day	0.15	595.00	89.25
0023	Hire charges for mixer	Day	0.04	200.00	8.00
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire brush (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				8,639.43

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				86.39
	TOTAL				8,725.82
	Add 15% for contractor's profit and overheads				1,308.87
	Cost for 100 sqm.				10,034.69
	Cost per Sqm.				100.35
	Say				100.35

16.33 2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cumof stone chippings of 13.2mm and11.2mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc complete, (tack coat to be paid for separately):

16.33.2 With paving Asphalt 60/70 with no solvent

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
	Paving Asphalt 60/70				
	(i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size				
	(ii) Hot bitumen @56kg. per cum. of stone aggregate @ 1.12cum. of 11.2mm nominal size				
7309	Bitumen :52x2.25+50xl. 12= 180kg	tonne	0.18	23,200.00	4,176.00
2211	Carriage of bitumen	tonne	0.18	53.21	9.58
2910	Stone chippings 13.2mm nominal size @2.25cum. per 100sqm.	cum	2.25	700.00	1,575.00
2911	Stone chippings 11.2mm nominal size @1.12cum. per 100sqm.	cum	1.12	700.00	784.00
2202	Carriage of aggregate 2.25+1.12=3.37 cum.	cum	3.37	53.21	179.32
0370	Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	quintal	0.36	300.00	108.00
2200	Carriage of steam coal	tonne	0.036	60.81	2.19
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate :				
	(a) For cleaning :				
0128	Mate	Day	0.08	138.45	11.08
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen:				
0114	Beldar(1.05x0.18)/0.267 = 0.71 nos.	Day	0.71	135.25	96.03
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	6.25	135.25	845.31
	(d) Consolidation Charges				
0113	Chowkidar	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
1235	Diesel for road roller @ 18 litres per day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
0001	Hire charges of boiler	Day	0.15	595.00	89.25
0023	Hire charges of mixer	Day	0.04	200.00	8.00
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire bursh (with thick wire)	each	0.11	15.00	1.65

Code	Description	Unit	Quantity	Rate	Amount
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				8,537.96
	Add 1 % for water charges				85.38
	TOTAL				8,623.34
	Add 15% for contractor's profit and overheads				1,293.50
	Cost for 100 sqm.				9,916.84
	Cost per Sqm.				99.17
	Say				99.15

16.33 2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2mm and 11.2mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete, (tack coat to be paid for separately):

16.33.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC : SP : 53-1999.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm. Paving Asphalt 80/100 (i) Hot bitumen @52kg.per cum. of stone chippings @2.25cum. of 13.2mm nominal size chippings. (ii) Hot bitumen @56kg. per cum. of aggregate @1.12cum. of 11.2mm nominal size.				
7739	Modified Bitumen CRMB - 55 (Refinery produced) :52x2.25+56xl.l2=180kg.	tonne	0.18	26,000.00	4,680.00
2914	Solvent 0.07x180=12.60kg.	kilogram	12.60	18.00	226.80
2211	Carriage of bitumen	tonne	0.18	53.21	9.58
2342	Carriage of solvent	quintal	0.126	5.32	0.67
2910	Stone chippings 13.2mm nominal size @2.25 cum. per 100sqm.	cum	2.25	700.00	1,575.00
2911	Stone chippings 11.2mm nominal size @1.12 cum. per lOOsqm.	cum	1.12	700.00	784.00
2202	Carriage of aggregate 2.25+1.12=3.37 cum.	cum	3.37	53.21	179.32
0370	Steam coal for heating of bitumen @2 quintals per tonne of bitumen =2x0.18=0.36q	quintal	0.36	300.00	108.00
2200	Carriage of steam coal	tonne	0.036	60.81	2.19
	Labour for cleaning the road surface, heating and spraying bitumen and aggregate : (a)For cleaning:				
0128	Mate	Day	0.08	138.45	11.08
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b)For heating bitumen:				
0114	Beldar	Day	0.71	135.25	96.03
	(c)For screening and spreading premixed aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	6.25	135.25	845.31
	(d)Consolidation Charges				

Code	Description	Unit	Quantity	Rate	Amount
0113	Chowkidar	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1000.00	110.00
1235	Diesel for road roller @ 18 litres	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
0001	Hire charges of boiler	Day	0.15	595.00	89.25
0023	Hire charges for mixer	Day	0.04	200.00	8.00
	(e) Misc:				
0364	Brushes etc. for cleaning, Wire brush (with thick wire)	each	0.11	15.00	1.65
0365	Soft brush	each	0.32	12.00	3.84
9999	Brooms and gunny bags	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				9,269.43
	Add 1% for water charges				92.69
	TOTAL				9,362.12
	Add 15% for contractor's profit and overheads				1,404.32
	Cost for 100sqm.				10,766.44
	Cost per Sqm.				107.66
	Say				107.65

16.34 2 cm premix carpet surfacing with 2.4cum of stone chippings 11.2 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen content) complying with IS : 8887-1995 using 96kg per cum of chipping including consolidation with road roller of 6 to 9 tonne capacity etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	Bitumen emulsion M.S. @96kg per cum. of aggregate				
7742	96x2.4=230kg =0.230t	tonne	0.23	19,500.00	4,485.00
2211	Carriage of bitumen emulsion	tonne	0.23	53.21	12.24
2911	Stone aggregate 11.2mm nominal size @ 2.4cum. per 100 sqm.	cum	2.40	700.00	1,680.00
2202	Carriage of stone aggregate	cum	2.40	53.21	127.70
	Labour				
	(a)For mixing and spreading premix aggregate :				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	3.54	135.25	478.78
	(b) Consolidation Charges				
0113	Chowkidar	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1,000.00	110.00
1235	Diesel for road roller @ 18 litres/day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
0023	Hire charges of mixer	Day	0.04	200.00	8.00
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				7,054.97
	Add 1% for water charges				70.55
	TOTAL				7,125.52
	Add 15% for contractor's profit and overheads				1,068.83
	Cost for 100 sqm.				8,194.35
	Cost per Sqm.				81.94
	Say				81.95

16.35 2.5 cm premix carpet surfacing with 3 cum of stone chippings 10 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen contents) complying with IS : 8887-1995 using 96 kg per cum of chippings of road surface including consolidation with road roller etc complete

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00sqm.				
	Bitumen emulsion M.S. @96kg per cum. of aggregate				
7742	96x3 = 288 kg = 0.2881	tonne	0.288	19,500.00	5,616.00
2211	Carriage of bitumen emulsion	tonne	0.288	53.21	15.32
2911	Stone aggregate 10 mm nominal size @ 3.00 cum. per 100 sqm.	cum	3.00	700.00	2,100.00
2202	Carriage of stone aggregate	cum	3.00	53.21	159.63
	Labour				
	(a)For mixing and spreading premix aggregate:				
0130	Mistry	Day	0.19	151.50	28.78
0114	Beldar	Day	4.10	135.25	554.52
	(b)Consolidation Charges				
0113	Chowkidar	Day	0.27	135.25	36.52
0101	Bhishti	Day	0.11	138.45	15.23
0003	Hire charges of road roller	Day	0.11	1000.00	110.00
1235	Diesel for road roller @ 18 litres/day	litre	2.00	30.25	60.50
9999	Carriage of diesel	L.S.	2.73	1.00	2.73
9999	Sundries	L.S.	9.49	1.00	9.49
	TOTAL				8,708.72
	Add 1% for water charges				87.09
	TOTAL				8,795.81
	Add 15%for contractor's profit and overheads				1,319.37
	Cost for 100 sqm.				10,115.18
	Cost per Sqm.				101.15
	Say				101.15

16.36 Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade including required key aggregate as specified, spreading coarse aggregate with the help of self propelled / tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy :

16.36.1 For 50mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10 sqm. With paving asphalt 80/100 @ 50 kg/10 sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 370 sqm.				
	(A) Material:				
	Taking 40mm = 45%				
	20mm = 44%				
	11.2mm = 8%				
	Stone dust = 3%				
0293	Stone aggregate 40mm (one size)	cum	9.99	650.00	6,493.50
0295	Stone aggregate 20mm (one size)	cum	9.77	700.00	6,839.00
0297	Stone aggregate 11.2mm (one size)	cum	1.78	700.00	1,246.00
1159	Stone dust	cum	0.60	700.00	420.00
	Key aggregate				
0295	Stone aggregate 20mm (one size)	cum	2.33	700.00	1,631.00
0296	Stone aggregate 13.2mm (one size)	cum	2.66	700.00	1,862.00
1159	Stone dust	cum	0.56	700.00	392.00
2206	Carriage of stone aggregate 40mm	cum	9.99	57.83	577.72
2202	Carriage of stone aggregate 20mm	cum	12.10	53.21	643.84
2202	Carriage of stone aggregate 13.2/11.2mm	cum	4.44	53.21	236.25
2267	Carriage of stone dust.	cum	1.16	53.21	61.72
	Bitumen 80/100 @ 50kg/10 sqm.				
2916	Bitumen 80/100 grade	tonne	1.85	22,500.00	41,625.00
2211	Carriage of bitumen	tonne	1.85	53.21	98.44
	(B) Labour:				
0114	Beldar for spreading stone metal	Day	16.67	135.25	2,254.62
0114	Beldar for hand packing	Day	5.33	135.25	720.88
0114	Beldar dry rolling	Day	2.67	135.25	361.12
0114	Bajri spreader	Day	1.33	135.25	179.88
0138	Sprayer	Day	0.67	138.45	92.76
0114	Beldar for spreading key aggregate	Day	1.33	135.25	179.88
0114	Beldar for spraying bitumen	Day	6.67	135.25	902.12
0114	Beldar of power roller	Day	0.67	135.25	90.62
0128	Mate	Day	1.77	138.45	245.06
	(C) Machinery :				
0001	Bitumen boiler oil fed capacity 1500 lit with spray unit	Day	0.45	595.00	267.75
0003	Road roller (8 to 10 tonne)	Day	0.61	1,000.00	610.00
9999	Misc. items as spray nozzle, joint paper, coconut oil, country soap etc.	L.S.	351.00	1.00	351.00
	(D) Fuel:				
	(i) Diesel for boiler @ 10 litres per hour = 40.00 lit +				
	(ii) Diesel for road roller @ 18 litt./day = 18x0.61 = 10.98 lit.				
1235	Total = 50.98 lit.	litre	50.98	30.25	1,542.14
9999	Carriage of diesel	L.S.	70.07	1.00	70.07
	TOTAL				69,994.37
	Add 1% for water charges				699.94
	TOTAL				70,694.31
	Add 15% for contractor's profit and overheads				10,604.15
	Cost for 370 Sqm.				81,298.46
	Cost per sqm.				219.73
	Say				219.75

16.36 Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade including required key aggregate as specified, spreading coarse aggregate with the help of self propelled / tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy :

16.36.2 For 75 mm compacted thickness in two layers using stone aggregate of size 63-41 mm graded @ 0.90 cum per 10 sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm. With paving asphalt 80/100 @ 68 kg/10 sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 300 sqm.				
	(A)Material:				
	Taking output as 300 sqm. for single layer.				
	Coarse agg. = 300/10x0.90 = 27 cum.				
	Key agg = 300/10x0.18 = 5.4 cum.				
	Bitumen = 300/10x68 = 2.04 t.				
0292	Stone aggregate 50mm (one size)	cum	8.10	625.00	5,062.50
0295	Stone aggregate 20mm (one size)	cum	14.58	700.00	10,206.00
0297	Stone aggregate 10mm (one size)	cum	4.32	700.00	3,024.00
	Key aggregate				
0294	Stone aggregate 25mm (one size)	cum	2.05	675.00	1,383.75
0296	Stone aggregate 12.5mm (one size)	cum	2.57	700.00	1,799.00
0297	Stone aggregate 10mm (one size)	cum	0.81	700.00	567.00
2916	Bitumen 80/100	tonne	2.04	22,500.00	45,900.00
2202	Carriage of aggregate	cum	32.40	53.21	1,724.00
2211	Carriage of bitumen	tonne	2.04	53.21	108.55
	(B) Labour:				
0114	Beldar for spreading stone metal	Day	25.00	135.25	3,381.25
0114	Beldar for hand packing	Day	8.00	135.25	1,082.00
0114	Beldar dry rolling	Day	4.00	135.25	541.00
0114	Beldar/Bajri spreader	Day	2.00	135.25	270.50
0138	Sprayer	Day	1.00	138.45	138.45
0114	Beldar for spreading key aggregate	Day	2.00	135.25	270.50
0114	Beldar for spraying bitumen	Day	10.00	135.25	1,352.50
0114	Beldar road roller	Day	1.00	135.25	135.25
0128	Mate	Day	2.65	138.45	366.89
	(C) Machinery :				
0001	(i) Bitumen boiler oil fed capacity 1500 lit with spray unit	Day	0.50	595.00	297.50
0003	(ii) Road roller (8 to 10 tonne)	Day	0.75	1,000.00	750.00
9999	Misc. items as spray nozzle, joint paper, coconut oil, country soap etc.	L.S.	429.00	1.00	429.00
	(D) Fuel:				
	(i) Diesel for boiler @ 10 litres per hour = 40.00 lit				
	(ii) Diesel for road roller @ 18 lit./day = 18x0.75 = 13.50 lit.				
1235	Total = 53.50 lit.	litre	53.50	30.25	1,618.38
9999	Carriage of diesel	L.S.	73.06	1.00	73.06
	TOTAL				80,481.08
	Add 1% for water charges				804.81
	TOTAL				81,285.89

Code	Description	Unit	Quantity	Rate	Amount
	Add 15% for contractor's profit and overheads Cost for 300 Sqm. Cost per sqm. Say				12,192.88 93,478.77 311.60 311.60

16.37 Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702 prepared by using mastic cooker and laid to required level and slope including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10cm centre to centre in both directions, pressed into surface protruding 1mm to 4mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification.)

16.37.1 25mm thick.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for surface area of 17.40 sqm for single layer of 25 mm finished thickness. Materials: Taking wearing coat as 1 tonne and density as 2.3 gm/c.c Volume of bitumen mastic = 1000/2300= 0.435 cum surface area = 0.435/0.025 = 17.4 sqm.				
0313	(i) Bitumen of penetration 85/25 @ 10.2% by weight of mix	tonne	0.102	25,000.00	2,550.00
2211	Carriage of bitumen	tonne	0.102	53.21	5.43
	(ii) Weight of coarse aggregate @ 40% (1000 - 150) x 40/100 = 340 kg. Stone aggregate : 340/43.38x0.0283 = 0.222 cum.				
0295	Stone Aggregate 20 mm.	cum	0.02	700.00	14.00
0296	Stone Aggregate 12.5mm	cum	0.202	700.00	141.40
	(iii) Weight of fine aggregate @ 15% 850x15/100 = 127.5 kg., volume of fine aggregate: 127.5/43.103x0.0283 =0.083 cum				
1159	Fine aggregate.	cum	0.083	700.00	58.10
	(iv) Weight of lime stone dust @ 45% (850-340-127.5) = 382.50 kg., Volume of lime stone dust 382.50/2200 =0.174 cum.				
0784	Lime aggregate.	cum	0.174	800.00	139.20
	(v) Precoated stone chipping for surface finish: Volume of chips @ 0.005 cum/10 sqm=17.4x0.005/10 = 0.0087 cum say 0.009 cum				
0297	Chips aggregate.	cum	0.009	700.00	6.30
	Bitumen for precoated stone chipping @ 2% =0.009x1600x2/100= 0.288 say 0.30 kg.				
0313	Bitumen 85/25	tonne	0.0003	25,000.00	7.50
2211	Carriage of bitumen	tonne	0.0003	53.21	0.02
2202	Carriage of Stone aggregate (0.222 + 0.009) =0.231 cum.	cum	0.231	53.21	12.29
2267	Carriage of fine aggregate.	cum	0.083	53.21	4.42
2208	Carriage of Lime dust.	cum	0.174	53.21	9.26
1235	Diesel for mastic cooker (Taking capacity of cooker as one tonne)	litre	100.00	30.25	3,025.00
9999	Carriage of diesel	L.S.	136.50	1.00	136.50
	Labour:				

Code	Description	Unit	Quantity	Rate	Amount
0139	Skilled Beldar.	Day	1.50	138.45	207.68
0130	Mistry	Day	0.50	151.50	75.75
0138	Sprayer	Day	3.50	138.45	484.58
0139	Skilled Beldar for surface finish.	Day	0.250	138.45	34.61
0128	Mate	Day	0.50	138.45	69.22
0016	Hire/ running charges of mastic cooker	Day	0.50	515.00	257.50
9999	sundries (Sealing of joints, placing angles, wastage materials)	L.S.	153.27	1.00	153.27
	Total				7,392.03
	Add 1 % for water charges				73.92
	Total				7,465.95
	Add 15% for contractor's profit and overheads.				1,119.89
	Cost for 17.40 sqm				8,585.84
	Cost per sqm				493.44
	Say				493.45

16.37 Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702 prepared by using mastic cooker and laid to required level and slope including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10cm centre to centre in both directions, pressed into surface protruding 1mm to 4mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification .)

16.37. 2 40 mm thick

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for surface area of 10.875sqm for single layer of 40 mm finished thickness. Materials: Taking wearing coat as 1 tonne and density as 2.3 gm/c.c Volume of bitumen mastic = 1000/2300= 0.435 cum Surface Area=0,435/0.040 = 10.875 sqm.				
0313	(i) Bitumen of penetration 85/25 @ 10.2% by weight of mix	tonne	0.102	25,000.00	2,550.00
2211	Carriage of bitumen	tonne	0.102	53.21	5.43
	(ii) Weight of coarse aggregate @ 40% (1000 - 150) x 40/100 = 340 kg. Stone aggregate : 340/43.38x0.0283 = 0.222 cum.				
0295	Stone Aggregate 20 mm.	cum	0.02	700.00	14.00
0296	Stone Aggregate 12.5mm	cum	0.202	700.00	141.40
	(iii) Weight of fine aggregate @ 15% 850x15/100 = 127.5 kg., volume of fine aggregate: 127.5/43.103x0.0283 =0.083 cum				
1159	Fine aggregate.	cum	0.083	700.00	58.10
	(iv) Weight of lime stone dust @ 45% (850-340-127.5) = 382.50 kg., Volume of lime stone dust 382.50/2200 =0.174 cum.				
0784	Lime aggregate.	cum	0.174	800.00	139.20
	(v) Precoated stone chipping for surface finish: Volume of chips @ 0.005 cum/10 sqm=17.4x0.005/10 = 0.0087 cum say 0.009 cum				

Code	Description	Unit	Quantity	Rate	Amount
0297	Chips aggregate. Bitumen for precoated stone chipping @ 2% =0.009x1600x2/100= 0.288 say 0.30 kg.	cum	0.009	700.00	6.30
0313	Bitumen 85/25	tonne	0.0003	25,000.00	7.50
2211	Carriage of bitumen	tonne	0.0003	53.21	0.02
2202	Carriage of Stone aggregate (0.222 + 0.009) =0.231 cum.	cum	0.231	53.21	12.29
2267	Carriage of fine aggregate.	cum	0.083	53.21	4.42
2208	Carriage of Lime dust.	cum	0.174	53.21	9.26
	Diesel for mastic cooker				
1235	(Taking capacity of cooker as one tonne)	litre	100.00	30.25	3,025.00
9999	Carriage of diesel	L.S.	136.50	1.00	136.50
	Labour:				
0139	Skilled Beldar.	Day	1.50	138.45	207.68
0130	Mistry	Day	0.50	151.50	75.75
0138	Sprayer	Day	3.50	138.45	484.58
0139	Skilled Beldar for surface finish.	Day	0.25	138.45	34.61
0128	Mate	Day	0.50	138.45	69.22
0016	Hire/ running charges of mastic cooker	Day	0.50	515.00	257.50
9999	sundries (Sealing of joints, placing angles, wastage materials)	L.S.	153.27	1.00	153.27
	Total				7,392.03
	Add 1% for water charges				73.92
	Total				7,465.95
	Add 15% for contractor's profit and overheads.				1,119.89
	Cost for 10.875 sqm				8,585.84
	Cost per sqm				789.50
	Say				789.50

16.38 2.5 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5 mm nominal size and 40% 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand at 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum, of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately):

16.38.1 With paving Asphalt 80/100 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm. 80/100 bitumen @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56xl.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg =0.211t				
2916	= Total= 0.303t	tonne	0.303	22,500.00	6,817.50
2914	Solvent 0.070 kg. x 303 kg. = 21.21kg.	kilogram	21.21	18.00	381.78
2211	Carriage of bitumen	tonne	0.303	53.21	16.12
2342	Carriage of solvent	quintal	0.212	5.32	1.13
2910	Stone chippings 13.2mm nominal size	cum	0.99	700.00	693.00
2911	Stone chippings 11.2mm nominal size	cum	0.66	700.00	462.00
2202	Carriage of stone chippings	cum	1.65	53.21	87.80
0370	Steam coal	quintal	0.606	300.00	181.80
2200	Carriage of steam coal	tonne	0.0606	60.81	3.69

Code	Description	Unit	Quantity	Rate	Amount
0982	Coarse sand	cum	1.65	600.00	990.00
2203	Carriage of sand	cum	1.65	53.21	87.80
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.16	138.45	22.15
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen :				
0114	Beldar	Day	1.19	135.25	160.95
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.24	151.50	36.36
0114	Beldar	Day	6.12	135.25	827.73
	(d) Consolidation charges :				
0113	Chowkidar (at barriers for night watch and for road roller)	Day	0.34	135.25	45.99
0101	Bhishti	Day	0.13	138.45	18.00
0003	Hire charges for road roller	Day	0.13	1,000.00	130.00
0001	Hire charges for boiler	Day	0.21	595.00	124.95
0023	Hire charges for mixer	Day	0.05	200.00	10.00
1235	Diesel for road roller	litre	2.34	30.25	70.78
9999	Carriage of diesel	L.S.	5.33	1.00	5.33
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.13	15.00	1.95
0365	Soft brush	each	0.40	12.00	4.80
9999	Brooms and gunny bags	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.97	1.00	8.97
	TOTAL				11,576.43
	Add 1% for water charges				115.76
	TOTAL				11,692.19
	Add 15% for contractor's profit and overheads				1,753.83
	Cost for 100 sqm.				13,446.02
	Cost per sqm.				134.46
	Say				134.45

16.38 2.5 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5 mm nominal size and 40% 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand at 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum, of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately):

16.38.2 With paving Asphalt 60/70. -

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	60/70 bitumen @56kg. per cum. of aggregate and 128kg. per cum. of sand:				
	56x1.65=92.4kg. = 0.092t +				
	128x1.65 = 211.2kg = 0.211 t				
7309	Total= 0.303t	tonne	0.303	23,200.00	7,029.60
2211	Carriage of bitumen	tonne	0.303	53.21	16.12
2910	Stone chippings 13.2mm nominal size	cum	0.99	700.00	693.00
2911	Stone chippings 11.2mm nominal size	cum	0.66	700.00	462.00
2202	Carriage of stone chippings	cum	1.65	53.21	87.80

Code	Description	Unit	Quantity	Rate	Amount
0370	Steam coal for heating bitumen @ 2 quintals per tonne of bitumen = 2x0.303=0.606q	quintal	0.606	300.00	181.80
2200	Carriage of steam coal	tonne	0.0606	60.81	3.69
0982	Coarse sand	cum	1.65	600.00	990.00
2203	Carriage of sand	cum	1.65	53.21	87.80
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.16	138.45	22.15
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen :				
0114	Beldar	Day	1.19	135.25	160.95
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.24	151.50	36.36
0114	Beldar	Day	6.12	135.25	827.73
	(d) Consolidation charges:				
0113	Chowkidar (at barriers for night watch and for road roller)	Day	0.34	135.25	45.99
0101	Bhishti	Day	0.13	138.45	18.00
0003	Hire charges for road roller	Day	0.13	1,000.00	130.00
0001	Hire charges for boiler	Day	0.21	595.00	124.95
0023	Hire charges for mixer	Day	0.05	200.00	10.00
1235	Diesel for road roller	litre	2.34	30.25	70.78
9999	Carriage of diesel	L.S.	5.33	1.00	5.33
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.13	15.00	1.95
0365	Soft brush	each	0.40	12.00	4.80
9999	Brooms and gunny bags	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.97	1.00	8.97
	TOTAL				11,405.62
	Add 1% for water charges				114.06
	TOTAL,				11,519.68
	Add 15% for contractor's profit and overheads				1,727.95
	Cost for 100 sqm.				13,247.63
	Cost per sqm.				132.48
	Say				132.50

16.38 2.5 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5 mm nominal size and 40% 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand at 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum, of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately):

16.38.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC : SP : 53-1999.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00sqm. Modified Bitumen CRMB - 55 (Refinery produced) @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56xl.65=92.4kg. = 0.092t + 128x1.65 = 211.2kg = 0.211 t				

Code	Description	Unit	Quantity	Rate	Amount
7739	= 0.303 t	Tonne	0.303	26,000.00	7,878.00
2914	Solvent 0.070 kg. x 303 kg. = 21.21kg.	kilogram	21.21	18.00	381.78
2211	Carriage of bitumen	tonne	0.303	53.21	16.12
2342	Carriage of solvent	quintal	0.212	5.32	1.13
2910	Stone chippings 13.2mm nominal size	cum	0.99	700.00	693.00
2911	Stone chippings 11.2mm nominal size	cum	0.66	700.00	462.00
2202	Carriage of stone chippings	cum	1.65	53.21	87.80
0370	Steam coal	quintal	0.606	300.00	181.80
2200	Carriage of steam coal	tonne	0.0606	60 .81	3.69
0982	Coarse sand	cum	1.65	600.00	990.00
2203	Carriage of sand	cum	1.65	53.21	87.80
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.16	138.45	22.15
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen :				
0114	Beldar	Day	1.19	135.25	160.95
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.24	151.50	36.36
0114	Beldar	Day	6.12	135.25	827.73
	(d) Consolidation charges:				
0113	Chowkidar (at barriers for night watch and for road roller)	Day	0.34	135.25	45.99
0101	Bhishti	Day	0.13	138.45	18.00
0003	Hire charges for road roller	Day	0.13	1,000.00	130.00
0001	Hire charges for boiler	Day	0.21	595.00	124.95
0023	Hire charges for mixer	Day	0.05	200.00	10.00
1235	Diesel for road roller	litre	2.34	30.25	70.78
9999	Carriage of diesel	L.S.	5.33	1.00	5.33
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.13	15.00	1.95
0365	Soft brush	each	0.40	12.00	4.80
9999	Brooms and gunny bags	L.S.	7.15	1.00	7.15
9999	Sundries	L.S.	8.97	1.00	8.97
	TOTAL				12,636.93
	Add 1% for water charges				126.37
	TOTAL				12,763.30
	Add lf15% for contractor's profit and overheads				1 914.50
	Cost for 100 sqm.				14,677.80
	Cost per sqm.				146.78
	Say				146.80

16.39 4 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5mm nominal size and 40% 10mm nominal size) @ 2.60cum per 100 sqm and coarse sand at 2.60cum per 100 sqm of road surface and with bitumen @ 56 kg/cum, of stone chippings and at 128 kg/cum of sand over a tack coat with-hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately):

16.39.1 With paving Asphalt 80/100 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for l00.00sqm. Paving asphalt 80/100 @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t				

Code	Description	Unit	Quantity	Rate	Amount
2916	= 0.479 t	tonne	0.479	22,500.00	10,777.50
2914	Solvent 0.70kg.x479=33.53kg.	kilogram	33.53	18.00	603.54
2342	Carriage of solvent	quintal	0.335	5.32	1.78
2211	Carriage of bitumen	tonne	0.479	53.21	25.49
2910	Stone chippings 13.2mm nominal size	cum	1.56	700.00	1,092.00
2911	Stone chippings 11.2mm nominal size	cum	1.04	700.00	728.00
2202	Carriage of aggregate	cum	2.60	53.21	138.35
0982	Coarse sand	cum	2.60	600.00	1,560.00
2203	Carriage of sand	cum	2.60	53.21	138.35
0370	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen = 2x0.479=0.958q	quintal	0.958	300.00	287.40
2200	Carriage of steam coal	tonne	0.0958	60.81	5.83
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.16	138.45	22.15
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen :				
0114	Beldar	Day	1.88	135.25	254.27
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.31	151.50	46.96
0114	Beldar	Day	9.46	135.25	1,279.47
	(d) Consolidation charges :				
0113	Chowkidar	Day	0.45	135.25	60.86
0101	Bhishti	Day	0.18	138.45	24.92
0003	Hire charges for road roller	Day	0.18	1000.00	180.00
1235	Diesel for road roller @ 18 litres per day	litre	3.24	30.25	98.01
0001	Hire charges for boiler	Day	0.30	595.00	178.50
0023	Hire charges for mixer	Day	0.03	200.00	6.00
9999	Carriage of diesel	L.S.	4.42	1.00	4.42
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.09	15.00	1.35
0365	Soft brush	each	0.27	12.00	3.24
9999	Brooms and gunny bags	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	16.12	1.00	16.12
	TOTAL				17,918.54
	Add 1% for water charges				179.19
	TOTAL				18,097.73
	Add 15% for contractor's profit and overheads				2, 714.66
	Cost for 100 sqm.				20, 812.39
	Cost per sqm.				208.12
	Say				208.10

16.39 4 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5mm nominal size and 40% 10mm nominal size) @ 2.60cum per 100 sqm and coarse sand at 2.60cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and at 128 kg/cum of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately):

16.39.2 With paving asphalt 60/70 with no solvent

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
	Paving asphalt 60/70 @56kg. per cum. of aggregate and 128kg. per cum. of sand:				
	56x2.60=145.6kg. = 0.146t +				
	128x2.60 = 332.8kg = 0.333t				
7309	= 0.479 t	tonne	0.479	23,200.00	11,112.80
2211	Carriage of bitumen	tonne	0.479	53.21	25.49

Code	Description	Unit	Quantity	Rate	Amount
2910	Stone chippings 13.2mm nominal size	cum	1.56	700.00	1,092.00
2911	Stone chippings 11.2mm nominal size	cum	1.04	700.00	728.00
2202	Carriage of aggregate	cum	2.60	53.21	138.35
0982	Coarse sand	cum	2.60	600.00	1,560.00
2203	Carriage of sand	cum	2.60	53.21	138.35
0370	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.479=0.958 qtl.	quintal	0.958	300.00	287.40
2200	Carriage of steam coal	tonne	0.0958	60.81	5.83
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.16	138.45	22.15
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen :				
0114	Beldar	Day	1.88	135.25	254.27
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.31	151.50	46.96
0114	Beldar	Day	9.46	135.25	1,279.47
	(d) Consolidation charges :				
0113	Chowkidar	Day	0.45	135.25	60.86
0101	Bhishti	Day	0.18	138.45	24.92
0003	Hire charges for road roller	Day	0.18	1,000.00	180.00
1235	Diesel for road roller @ 18 litres per day	litre	3.24	30.25	98.01
0001	Hire charges for boiler	Day	0.30	595.00	178.50
0023	Hire charges for mixer	Day	0.03	200.00	6.00
9999	Carriage of diesel	L.S.	4.42	1.00	4.42
	(e) Brushes etc. for cleaning :-				
0364	Wire brush (with thick wire)	each	0.09	15.00	1.35
0365	Soft brush	each	0.27	12.00	3.24
9999	Brooms and gunny bags	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	16.12	1.00	16.12
	TOTAL				17,648.52
	Add 1% for water charges				176.49
	TOTAL				17,825.01
	Add 15% for contractor's profit and overheads				2673.75
	Cost for 100 sqm.				20,498.76
	Cost per sqm.				204.99
	Say				205.00

16.39 4 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5mm nominal size and 40% 10mm nominal size) @ 2.60cum per 100 sqm and coarse sand at 2.60cum per 100 sqm of road surface and with bitumen @ 56 kg/cum, of stone chippings and at 128 kg/cum of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately):

16.39.3 With Refinery Modified Bitumen CRMB 55 conforming to IRC : SP : 53-1999.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm. Modified Bitumen CRMB - 55 (Refinary produced) @56kg. per cum. of aggregate and 128kg. per cum. of sand: 56x2.60=145.6kg. = 0.146t + 128x2.60 = 332.8kg = 0.333t				

Code	Description	Unit	Quantity	Rate	Amount
7739	= 0.479 tonne	Tonne	0.479	26,000.00	12,454.00
2914	Solvent 0.70kg.x479=33.53kg.	kilogram	33.53	18.00	603.54
2342	Carriage of solvent	quintal	0.335	5.32	1.78
2211	Carriage of bitumen	tonne	0.479	53.21	25.49
2910	Stone chippings 13.2mm nominal size	cum	1.56	700.00	1,092.00
2911	Stone chippings 11.2mm nominal size	cum	1.04	700.00	728.00
2202	Carriage of aggregate	cum	2.60	53.21	138.35
0982	Coarse sand	cum	2.60	600.00	1,560.00
2203	Carriage of sand	cum	2.60	53.21	138.35
0370	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen = 2x0.479=0.95 8q	quintal	0.958	300.00	287.40
2200	Carriage of steam coal	tonne	0.0958	60.81	5.83
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.16	138.45	22.15
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(b) For heating bitumen :				
0114	Beldar	Day	1.88	135.25	254.27
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0130	Mistry	Day	0.31	151.50	46.96
0114	Beldar	Day	9.46	135.25	1,279.47
	(d) Consolidation charges :				
0113	Chowkidar	Day	0.45	135.25	60.86
0101	Bhishti	Day	0.18	138.45	24.92
0003	Hire charges for road roller	Day	0.18	1,000.00	180.00
1235	Diesel for road roller @ 18 litres per day	litre	3.24	30.25	98.01
0001	Hire charges for boiler	Day	0.30	595.00	178.50
0023	Hire charges for mixer	Day	0.03	200.00	6.00
9999	Carriage of diesel	L.S.	4.42	1.00	4.42
	(e) Misc:				
0364	Wire brush (with thick wire)	each	0.09	15.00	1.35
0365	Soft brush	each	0.27	12.00	3.24
9999	Brooms and gunny bags	L.S.	5.33	1.00	5.33
9999	Sundries	L.S.	16.12	1.00	16.12
	TOTAL				19,595.04
	Add 1% for water charges				195.95
	TOTAL				19,790.99
	Add 15% for contractor's profit and overheads				2,968.65
	Cost for 100 sqm.				22,759.64
	Cost per sqm.				227.60
	Say				227.60

16.40 Providing and laying seal coat of premixed fine aggregate (passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade 80 /100 bitumen per cum of fine aggregate and 0.60cum of fine aggregate per 100 sqm of road surface including rolling and finishing withroad roller all complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for l00.00 sqm.				
2916	Bitumen @ 128kg/cum. of sand 128x0.60 = 76.80kg. = 0.0768 m.t.	tonne	0.0768	22,500.00	1,728.00
2211	Carriage of bitumen	tonne	0.0768	53.21	4.09
0982	Fine aggregate (Coarse sand)	cum	0.60	600.00	360.00

Code	Description	Unit	Quantity	Rate	Amount
2203	Carriage of coarse sand	cum	0.60	53.21	31.93
0370	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.768=0.1.536 qtl.	quintal	1.536	300.00	460.80
2200	Carriage of steam coal	tonne	0.1536	60.81	9.34
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For cleaning:				
0128	Mate	Day	0.06	138.45	8.31
0114	Beldar	Day	0.49	135.25	66.27
0115	Coolie	Day	0.97	135.25	131.19
	(b) For heating bitumen :				
0114	Beldar-0.38/96x76.8	Day	0.30	135.25	40.57
	(c) For cleaning, mixing and spreading pre-mix aggregate :				
0114	Beldar-11.39/0.75x0.60	Day	1.11	135.25	150.13
0130	Mistry-0.06/0.75x0.60	Day	0.05	151.50	7.58
	(d) Miscellaneous :				
0113	Chowkidar (at barrier for night watch and for road roller)	Day	0.15	135.25	20.29
0101	Bhishti	Day	0.06	138.45	8.31
0003	Hire charges for road roller	Day	0.06	1,000.00	60.00
0001	Hire charges for boiler	Day	0.05	595.00	29.75
0023	Hire charges for mixer	Day	0.01	200.00	2.00
1235	Diesel for road roller	litre	1.08	30.25	32.67
9999	Carriage of diesel	L.S.	0.26	1.00	0.26
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Sundries	L.S.	18.20	1.00	18.20
	TOTAL				3,171.88
	Add 1 % for water charges				31.72
	TOTAL				3,203.60
	Add 15% for contractor's profit and overheads				480.54
	Cost for 100 sqm.				3,684.14
	Cost per sqm.				36.84
	Say				36.85

16.41 Providing and laying seal coat over prepared surface of road with bitumen heated in bitumen boiler fitted with the spray set spraying using 98 kg of bitumen of grade 80/100 and blinding surface with 0.90cum of stone aggregate of 6.7 mm size (Passing 11.2mm sieve and retained on 2.36mm sieve) per 100 sqm of road surface including rolling and finishing with power road roller all complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm.				
2916	Bitumen 80/100	tonne	0.098	22,500.00	2,205.00
2211	Carriage of bitumen	tonne	0.098	53.21	5.21
0298	Stone aggregate	cum	0.90	750.00	675.00
2202	Carriage of stone aggregate	cum	0.90	53.21	47.89
0370	Steam coal for heating bitumen @ 2 qunitals per tonne of bitumen =2x0.0.98=1.96 qtl.	quintal	1.96	300.00	588.00
2200	Carriage of steam coal	tonne	0.196	60.81	11.92
	Labour for cleaning road surface, heating bitumen mixing and spreading aggregate :				
	(a) For heating and spraying bitumen :				

Code	Description	Unit	Quantity	Rate	Amount
0130	Mistry	Day	0.04	151.50	6.06
0138	Sprayman	Day	0.06	138.45	8.31
0114	Beldar	Day	0.69	135.25	93.32
	(b) For cleaning:				
0128	Mate	Day	0.11	138.45	15.23
0114	Beldar	Day	1.40	135.25	189.35
0115	Coolie	Day	1.40	135.25	189.35
	(c) For screening and spraying aggregate :				
0128	Mate	Day	0.05	138.45	6.92
0114	Beldar	Day	0.51	135.25	68.98
	(d) Misc :				
0113	Chowkidar (at barrier for night watch and for road roller)	Day	0.15	135.25	20.29
0101	Bhishti	Day	0.06	138.45	8.31
0003	Hire charges for road roller	Day	0.06	1,000.00	60.00
0007	Hire charges for tar sprayer unit	Day	0.06	250.00	15.00
1235	Diesel for road roller @ 18 litres per day	litre	1.08	30.25	32.67
0001	Hire charges of boiler	Day	0.06	595.00	35.70
	(e) Misc :				
0364	Wire brush (with thick wire)	each	0.05	15.00	0.75
0365	Soft brush	each	0.12	12.00	1.44
9999	Sundries	L.S.	18.20	1.00	18.20
9999	Brooms and gunny bags	L.S.	2.73	1.00	2.73
	TOTAL				4,305.63
	Add 1% for water charges				43.06
	TOTAL				4,348.69
	Add 15% for contractor's profit and overheads				652.30
	Cost for 100 sqm.				5,000.99
	Cost per sqm.				50.01
	Say				50.00

16.42 Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Cement concrete 1:2:4 mix				
0293	Stone aggregate 40mm*(one size)	cum	0.52	650.00	338.00
0295	Stone aggregate 20mm (one size) -	cum	0.22	700.00	154.00
0297	Stone aggregate 10mm (one size) -	cum	0.11	700.00	77.00
2206	Carriage of stone aggregate 40mm	cum	0.52	57.83	30.07
2202	Carriage of stone aggregate 20mm .	cum	0.33	53.21	17.56
0982	Coarse sand	cum	0.445	600.00	267.00
2203	Carriage of coarse sand	cum	0.445	53.21	23.68
0367	Cement	tonne	0.32	4,500.00	1,440.00
2209	Carriage of cement	tonne	0.32	47.29	15.13
	Labour:				
0155	Mason (Av.)	Day	0.10	146.55	14.66
0114	Beldar	Day	1.63	135.25	220.46
0101	Bhishti	Day	0.70	138.45	96.92
0002	Mixer (Concrete)	Day	0.077	400.00	30.80
0012	Vibrator	Day	0.07	200.00	14.00
9999	Sundries	L.S.	26.00	1.00	26.00
	Side shuttering :				
	Taking the slab to be 15cm thick and width to				

Code	Description	Unit	Quantity	Rate	Amount
	be 6 metre, length of road 27 metre = 9.90/24.30				
	(Rate as per item No.5.9.1 S.H.R.C.C. work)	Sqm	0.407	119.25	48.53 (A)
9999	Sundries =	L.S.	1.43	1.00	1.43
	TOTAL				2815.24
	Add 1% for water charges on all except 'A'				27.67
	TOTAL				2842.91
	Add 15% for contractor's profit and overheads on all except 'A'				419.16
	Cost for one cum.				3262.07
	say				3262.05

16.43 Providing and laying design mix cement concrete in roads, taxi tracks and runways having a minimum works test beam flexural strength of 30 kg. per cm² at 28 days using not less than 340 Kg. of cement per cum of finished concrete, coarse sand and graded stone aggregate of 40mm nominal size in appropriate proportions as per specified design criteria approved by Engineer-in-charge,mechanically. vibrated using needle and surface vibrators including steel form work with sturdy M- S. channel sections including curing and providing and filling construction joints and dummy joints with approved joint filter Primer or equivalent including rounding of the edges and filling the grooves 10x25mm deep at top for construction joints and 10mmx50mm deep at top for dummy joints with joint sealing compound (conforming to grade B of IS : 1834) including making necessary arrangements for expansion joints etc. all complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	Materials:				
0367	Cement	tonne	0.34	4,500.00	1,530.00
2209	Carriage of cement	tonne	0.34	47.29	16.08
0293	Stone aggregate 40mm	cum	0.52	650.00	338.00
0295	Stone aggregate 20mm	cum	0.22	700.00	154.00
0297	Stone aggregate 10mm	cum	0.11	700.00	77.00
0982	Coarse sand	cum	0.445	600.00	267.00
2206	Carriage of stone aggregate 40mm nominal size	cum	0.52	57.83	30.07
2202	Carriage of stone aggregate below 40mm	cum	0.33	53.21	17.56
2203	Carriage of coarse sand	cum	0.445	53.21	23.68
	Labour :-For mixing and laying				
0114	Beldar	Day	0.90	135.25	121.72
0115	Coolie	Day	0.60	135.25	81.15
0101	Bhishti	Day	0.27	138.45	37.38
0123	Mason 1st class	Day	0.05	151.50	7.58
0124	Mason 2nd class	Day	0.05	141.60	7.08
0128	Mate	Day	0.04	138.45	5.54
	For compaction by vibrator				
0155	Mason (av.)	Day	0.07	146.55	10.26
0114	Beldar	Day	0.07	135.25	9.47
	Machinery:				
0002	(i) Hire charges of mixer (Assuming 25 cum. per day)	Day	0.05	400.00	20.00
0021	(ii) Pin vibrator (SHP) with 50 cum. output per day	Day	0.025	288.00	7.20
0022	(iii) Surface vibrator with 25 cum. output per	Day	0.05	330.00	16.50

Code	Description	Unit	Quantity	Rate	Amount
	Fuel Charges :				
1235	(i) Diesel for mixer	litre	1.20	30.25	36.30
1235	(ii) Diesel for Pin vibrator (10 lit. / day assumed)	litre	0.25	30.25	7.56
1235	(iii) Diesel for Surface vibrator (5 lit./ day assumed)	litre	0.25	30.25	7.56
	Add for construction and filling of dummy joints				
(A)	Rate as per Annexure (A)	cum	1.00	96.32	96.32
	Add for steel form work				
(A)	Rate as per Annexure (B)	cum	1.00	199.20	199.20
9999	Erection and transportation and testing of weigh batch plant etc.	L.S.	54.60	1.00	54.60
	TOTAL				3,178.81
	Add 1% for water charges				31.79
	TOTAL				3,210.60
	Add 15% for contractor's profit and overheads				481.59
	Cost per cum.				3,692.19
	Say				3,692.20

Code	Description	Unit	Quantity	Rate	Amount
	ANNEXTURE 'A' to item No. 16.43				
	Details of cost for 8.50 cum.				
	Materials:				
	(i) Painting with primer				
	(i) Construction joint 6.15m. long 30cm deep				
	6.15x(0.30+0.01)= 1.91sqm.+				
	(ii) Dummy joints				
	4.61m long and 10cm deep 10mm wide				
	4.6 lx(0.10+0.10+0.01) = 0.97 sqm.				
	= 2.88 sqm.				
	2.88sqm. @0.26 lit./sqm. = 0.75 lit. +				
	Add 5% wastage = 0.03				
0316	=0.78 lit.	Litre	0.78	28.00	21.84
9999	Carriage of primer	L.S.	0.91	1.00	0.91
	(ii) Joint sealing compound (GradeA) for construction joint 6.15m long 10mm wide 25mm deep.				
	6.15x2x2.5cm = 3075cucm.				
	For dummy joints				
	461xl.0xl0cm. = 4610cucm.				
	= 7685 cum				
	Add 5% wastage = 384 cucm				
	= 8069 cucm				
0314	= 8.07 cudm. @1.2kg/cudm.	kilogram	9.68	20.00	193.60
9999	Carriage of sealing compound	L.S.	0.91	1.00	0.91
0370	Steam coal	quintal	0.015	300.00	4.50
9999	Carriage of steam coal	L.S.	0.91	1.00	0.91

Code	Description	Unit	Quantity	Rate	Amount
	Labour:				
0123	Mason 1 st class (ii) For applying primer qty. = 2.88 sqm.	Day	3.00	151.50	454.50
0131	Painter = (iii) Labour for heating and filling sealing compound.	Day	0.10	141.60	14.16
0124	Mason 2nd class (iv) Beldar for heating = 0.06 +	Day	0.25	141.60	35.40
0114		Day	0.68	135.25	91.97
	Cost of 8.5 cum				818.70
	Cost per cum.				96.32
	Say-				96.32
	ANNEXTURE B to item No. 16.43 STEEL FORM WORK : Part-1 Cost of materials : Assuming that pavement 30m long 22.5m wide and 0.30m deep having panel size 6.15x4.6lx0.30m or 8.50cum laid in a day of 8 hrs. Hence form work to be provided for 2 days. Material for 61.5m long 46.10m wide pavement 22x30.75 = 676.50 2x46.10 = 92.20 Total = 768.70m. 768.70 @ 83.10 kg/ m = 25.44 M.T. Assuming that channel will become unserviceable after use for 5000 slab (100 times) and salvage value of steel shall fetch 20% of its basic cost.				
1007	Steel 254.44 qx4/5x 1/5000 = 0.0407104 q	quaintal	0.0407104	3,100.00	126.20
2205	Carriage of steel 25.44x4/5x1/5000= 0.00407104 tonne	tonne	0.00407104	47.29	0.19
	Part-II Labour for assembling, errection, dismetelling and cleaning the shuttering. Assuming that 255 labour for steel shuttering shall be required as compared to timber shuttering. Contact area of 50 slabs of steel shuttering. Long channel = 11x20x0.30 = 66.00 = 2x45.10x0.30 = 27.06 Total= 93.06				
0103	Blacksmith 2nd class	Day	2.86	141.60	404.98
0114	Beldar =	Day	2.86	135.25	386.82
	Carriage of steel for extra lead of runway				
0114	Beldar =	Day	5.73	135.25	774.98
	Cost of 50 slabs 8.5 cum.				1,693.17
	Cost per cum				199.20
	Say				199.20

16.44 Extra for providing and mixing hardening campound of approved quality as per manufacturer's specification in cement concrete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 litre				
	Materials :				
7254	Hardening compound (including cartage)	litre	1.00	29.00	29.00
	TOTAL				29.00
	Add 1 % for water charges				0.29
	TOTAL				29.29
	Add 15% for contractor's profit and overheads				4.39
	Cost per litre				33.68
	Say				33.70

16.45 Providing and fixing in position premoulded joint filler in expansion joints.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 18mm thick 15cm deep and 300m in length = 300x0.15 = 45 sqm.				
0317	18mm thick joint filler	sqm	45.00	300.00	13,500.00
	Carriage of filler				
	45x0.018 =0.81 cum.				
	Weight 256.3kg. per cum. = 256.3x0.81 = 207.6kg.				
2211	= 0.21 tonne	tonne	0.21	53.21	11.17
	Labour for fixing etc. :				
0124	Mason 2nd class	Day	1.00	141.60	141.60
0114	Beldar	Day	3.00	135.25	405.75
9999	Sundries	L.S.	26.91	1.00	26.91
	TOTAL				14,085.43
	Add 1 % for water charges				140.85
	TOTAL				14,226.28
	Add 15% for contractor's profit and overheads				2,133.94
	Cost for 300m length, 18mm width and 15cm depth				16,360.22
	Cost for one cm. depth one cm. width per metre length.				2.02
	Say				2.00

16.46 Providing and laying in position bitumen hot sealing compound for expansion joints etc.

16.46.1 Using grade 'A' sealing compound.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20mm wide 20mm deep and 300 metres in length.				
	Sealing compound-				
	300x0.02x0.02 = 0.12cum.				
0314	Weight 256.3kg. per cum. = 256.3x0.12 = 30.76 kg.	kilogram	30.76	20.00	615.20
2211	Carriage of compound 30.76 = 0.3076 Say 0.03 tonne	tonne	0.03	53.21	1.60
	Labour for filling:				
0124	Mason 2nd class	Day	1.00	141.60	141.60
0114	Beldar	Day	2.5	135.25	338.12

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	20.67	1.00	20.67
	TOTAL				1,117.19
	Add 1 % for water charges				11.17
	TOTAL				1,128.36
	Add 15% for contractor's profit and overheads				169.25
	Cost for 20mm depth, 20mm width and 300m length				1,297.61
	Cost for one cm. depth one cm. width per metre length.				1.08
	Say				1.10

16.47 Painting runway/taxi track/apron marking with adequate no. of coat to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge including cleaning the surface of all dirt, scales, oil, grease and other foreign material etc and lining out complete.

16.47.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10sqm.				
	Material:				
	1st Coat = 1.66 +				
	2nd Coat = 1.13				
	= 2.79				
7256	Road marking paint	litre	2.79	148.00	412.92
9999	Carriage of paint	L.S.	5.07	1.00	5.07
	Labour:				
0131	Painter	Day	0.54	141.60	76.46
0114	Beldar	Day	0.54	135.25	73.04
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	36.40	1.00	36.40
	TOTAL				603.89
	Add 1% for water charges				6.04
	TOTAL				609.93
	Add 15% for contractor's profit and overheads				91.49
	Cost for 10 sqm.				701.42
	Cost per sqm.				70.14
	Say				70.15

16.47 Painting runway/taxi track/apron marking with adequate no. of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge i/c cleaning the surface of all dirt, scales, oil, grease and other foreign material etc. and lining out complete.

16.47.2 Old work (One or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Material:				
7256	Road marking paint	litre	1.66	148.00	245.68
9999	Carriage of paint	L.S.	1.12	1.00	1.12
	Labour:				
0131	Painter	Day	0.36	141.60	50.98
0114	Beldar	Day	0.36	135.25	48.69
9999	Sundries (including painting brush, wire	L.S.	24.44	1.00	24.44

Code	Description	Unit	Quantity	Rate	Amount
	brush, labour for controlling traffic and other T&P etc.)				
	TOTAL				370.91
	Add 1 % for water charges				3.71
	TOTAL				374.62
	Add 15% for contractor's profit and overheads				56.19
	Cost for 10 sqm.				430.81
	Cost per sqm.				43.08
	Say				43.10

16.48 Painting road surface marking with adequate no. of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.

16.48.1 New work (Two or more coats).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10sqm.				
	Material:				
7255	Road marking paint (confirming to IS 164 spirit base)	litre	1.48	97.00	143.56
9999	Carriage of paint (1.48/0.80×0.08×6.9)	L.S.	2.65	1.00	2.65
	Labour:				
0128	Mate/Supervisor	Day	0.10	138.45	13.84
0131	Painter	Day	0.54	141.60	76.46
0114	Beldar for stretching of rope & erecting of barricading	Day	1.68	135.25	227.22
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	36.40	1.00	36.40
	TOTAL				500.13
	Add 1% for water charges				5.00
	TOTAL				505.13
	Add 15% for contractor's profit and overheads				75.77
	Cost for 10 sqm.				580.90
	Cost per sqm.				58.09
	Say				58.10

16.48 Painting road surface marking with adequate no. of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.

16.48.2 Old work (One or more coats)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10sqm.				
	Material:				
7255	Road marking paint (confirming to IS 164 spirit base)	litre	0.89	97.00	86.33
9999	Carriage of Paint	L.S.	0.65	1.00	0.65
	Labour:				
0128	Mate/Supervisor	Day	0.06	138.45	8.31
0131	Painter 2nd class	Day	0.36	141.60	50.98
0114	Beldar (stretching of rope & erecting of	Day	1.12	135.25	151.48

Code	Description	Unit	Quantity	Rate	Amount
	barricading etc.)				
9999	Sundries (including painting brush, wire brush, labour for controlling traffic and other T&P etc.)	L.S.	24.44	1.00	24.44
	TOTAL				322.19
	Add 1% for water charges				3.22
	TOTAL				325.41
	Add15 % for contractor's profit and overheads				48.81
	Cost for 10 sqm.				374.22
	Cost per sqm.				37.42
	Say				37.40

16.49 Making bell mouth opening/ entrance of size 100x50x50cm for drainage pipe under footpath including providing cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20mm nominal size) for shape of bell mouth including plastering providing and fixing precast R.C.C./ S.F.R.C. slab including plastering with cement mortar 1:3 (1 cement: 3 fine sand) of 6 mm thickness on exposed surface of the slab & bell mouth including centring, shuttering & neat cement punning inside the bell mouth etc. all complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 Nos.				
	(i) Earth work in excavation				
	Channel:- 10x1x1.00x0.20x0.15=0.30+				
	Bell mouth 10x1x1.00x0.50x(0.18+0.075)/2= 0.64				
	(Rate as per item no. 2.8.1) Total = 0.94	cum	0.94	103.40	97.20(A)
	(ii) Cement concrete 1:4:8				
	Channel :-10x1x1.00x0.20x0.075 = 0.15 cum.				
	(Rate as per item no.4.1.8	cum	0.15	2449.00	367.35(A)
	(iii) Cement concrete 1:3:6				
	Channel				
	10x1x1.00x0.20x0.075 = 0.15 +				
	Bed of bell mouth :				
	10x1x1.00x0.50x(0.18+0.075)/2 = 0.64 +				
	Haunches portion				
	10x2x(0.35+0.075)/2x0.25x0.375 = 0.40 +				
	Rect part :-				
	10x2x0.35x0.25x0.375 = 0.65 +				
	Quadrant portion :-				
	10x 1 [(0.30x0.30)-3.142/4(0.30)^x0.30				
	=0.06+				
	Central middle part :-				
	10x1x0.30x0.25x0.075 = 0.05				
	Total = 1.95 cum.				
	(Rate as per item no.4.1.5)	cum	1.95	2 791.05	5,442.55(A)
	(iv) RCC in shelves 1:2:4				
	10x1x1.00x0.50x0.05 =0.25cum.				
	(Rate as per item no. 5.3 SH : R.C.C.)	cum	0.25	3 673.85	918.46(A)
	(v) Reinforcement for RCC @100kg/cum.				
	0.25x100=25kg.				
	(Rate as per item no 5.22.1)	kg	25.00	41.50	1,037.50(A)
	(vi) Centering and shuttering				
	For shelves (sides)				
	(X)10x2(1.00+0.50)x0.05= 1.50+				
	Front side of bell mouth :				
	(X)10x2(0.446)x0.375 = 3.34 +				

Code	Description	Unit	Quantity	Rate	Amount
	Pipe portion: 10x[0.30x0.375-3.142/4(0.30)^2] = 0.04 + Out side of bell mouth = 10x(1.00÷0.50)x0.45 = 9.00+ Deduct pipe opening =10x0.785x0.30x0.30 = (-)0.71 = 13.17				
	(Rate as per item no.5.9.1)	sqm	13.17	119.25	1570.52
	(vii) cement plaster on RCC slab 10x1.00x0.50 = 5.00+ 10x2(1.00+0.50)x0.05 = 1.50+ = 6.50 sqm.				
	(Rate as per item no.13.16.1)	sqm	6.50	62.15	403.98
	(viii) Neat cement punning: Qty. same as marked (x) at (vi) above =3.34+0.04 = 3.38 sqm. Channel portion: 10x1x(0.85+0.30)/2x0.25 = 1.43 Total = 4.81				
	(Rate as per item no.l3.18 S.H. Finishing)	sqm	4.81	21.40	102.93
0367	Cement	tonne	0.024	4500.00	108.00(A)
2209	Carriage of cement	tonne	0.024	47.29	1.13(A)
0983	Fine sand	cum	0.05	320.00	16.00(A)
2261	Carriage of fine sand	cum	0.05	53.21	2.66(A)
0114	Beldar	Day	0.035	135.25	4.73(A)
0101	Bhishti	Day	0.003	138.45	0.42(A)
9999	Hire charges of mixer	L.S.	1.27	1.00	1.27(A)
9999	Sundries	L.S.	1.27	1.00	1.27(A)
	Labour for plaster				
0155	Mason	Day	0.33	146.55	48.36(A)
0115	Coolie	Day	0.488	135.25	66.00(A)
0101	Bhishti	Day	0.60	138.45	83.07(A)
9999	Extra for removing burr	L.S.	8.71	1.00	8.71(A)
9999	Scaffolding	L.S.	7.62	1.00	7.62(A)
	TOTAL				10,289.73
	(B) Add 1 % for water charges on (A)				3.49(B)
	TOTAT				10,293.22
	Add 15% for contractor's profit and overheads on (A+B)				52.91
	Cost for 10 nos.				10,346.13
	Cost for one bell mouth				1034.61
	Say				1034.60

16.50 Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by Engineer in charge. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 +/-5 degrees to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as

recommended in BS : 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 15 Nos.				
	Materials:				
7426	Cats eye	each	15.00	450.00	6 750.00
9999	Carriage of cat's eye	L.S.	2.60	1.00	2.60
	Labour:				
0124	Mason 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries (including material required for fixing cats eyes and providing barricading to divert traffic)	L.S.	39.00	1.00	39.00
	TOTAL				6 930.02
	Add 1% for water charges				69.30
	TOTAL				6 999.32
	Add 15% for contractor's profit and overheads				1 049.90
	Cost for 15 Nos.				8 049.22
	Cost for one cat's eye.				536.61
	Say				536.60

16.51 Preparation of sub-base road pavement with commercial dry lime (slaked), fly ash stabilised soil with a mix of 3% lime, 12% fly ash and 85% local suitable soil by weight, so as to achieve minimum field C.B.R. of 20 including mixing, rolling with road roller curing etc. all complete.

16.51.1 Minimum thickness 15 cm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 6.67 sqm. or 1 cum.				
	Materials:				
0777	slaked lime	quintal	0.41	177.00	72.57
2208	Carriage of lime	cum	0.068	53.21	3.62
1980	Flyash	cum	0.277	6.00	1.66
2267	Carriage of Flyash	cum	0.277	53.21	14.74
	Labour:				
	(i)For earth work:				
0114	Beldar	Day	0.116	135.25	15.69
0115	Coolie	Day	0.116	135.25	15.69
0979	Royalty for good earth	cum	0.655	11.00	7.20
2241	Carriage of good earth	cum	0.655	66.51	43.56
	(ii) For mixing:				
0114	Beldar	Day	0.025	135.25	3.38
0115	Coolie	Day	0.025	135.25	3.38
	(iii) For rolling layers :				
0113	Chowkidar	Day	0.0008	135.25	0.11
0003	Hire charges of roller	Day	0.0008	1 000.00	0.80
1235	Diesel for road roller	litre	0.0144	30.25	0.44
2342	Carriage of diesel	quintal	0.0002	5.32	
9999	Sundries	L.S.	0.18	1.00	0.18
	(iv) Labour for spreading and watering :				
0114	Beldar	Day	0.26	135.25	35.16

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.26	135.25	35.16
0101	Bhishti	Day	0.18	138.45	24.92
	TOTAL				278.26
	Add 1% for water charges				2.78
	TOTAL				281.04
	Add 15% for contractor's profit and overheads				42.16
	Cost for 1 cum.				323.20
	Say				323.20

16.52 Providing and fixing precast lime fly ash concrete blocks 1:2:3:6 (1 lime : 2 fly ash : 3 coapSe sand : 6 graded stone aggregate 20 mm nominal size) including finishing with 10mm thick cement mortar 1:3 (1 cement: 3 coarse sand) in foot paths including preparation of sub grade with a hand rammer, laying 10 mm thick leveling course of fine sand (jamuna sand) and filling the joints with fine sand.

Code	Description	Unit	Quantity	Rate	Amount
	Sub Analysis - X				
	Details of cost for 1 cum of lime Flyash mortar 1:2:3 (lime:2 flyash:3 coarse sand).				
	Materials:				
0773	Unslaked lime	quintal	1.52	260.00	395.20
1980	Flyash	cum	0.48	6.00	2.88
0982	Coarse sand	cum	0.72	600.00	432.00
2208	Carriage of Unslaked lime	cum	0.24	53.21	12.77
2262	Carriage of Flyash	cum	0.48	53.21	25.54
2203	Carriage of Coarse sand	cum	0.72	53.21	38.31
	Labour for slaking the lime making, lime putty, grinding, measuring, carrying, depositing and mixing.				
0114	Beldar	Day	0.90	135.25	121.72
0101	Bhishti	Day	0.45	138.45	62.30
9999	Running and upkeep of mortar mill	L.S.	26.91	1.00	26.91
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				1,131.15
	Cost of 1.00 cum				1 131.15
	Sub Analysis - Y				
	Details of cost for 1 cum. of cement concrete				
	Materials:				
	Lime Flyash mortar				
	Rate as per Sub Analysis 16.52 (Marked 'X')	cum	0.40	1131.15	452.46
0295	Stone aggregate 20mm nominal size	cum	0.64	700.00	448.00
0297	Stone aggregate 10mm nominal size	cum	0.21	700.00	147.00
2202	Carriage of stone aggregate	cum	0.85	53.21	45.23
	Labour:				
0114	Beldar	Day	0.65	135.25	87.91
0115	Coolie	Day	0.60	135.25	81.15
0101	Bhishti	Day	0.27	138.45	37.38
0123	Mason 1st class	Day	0.05	151.50	7.58
0124	Mason 2nd class	Day	0.05	141.60	7.08

Code	Description	Unit	Quantity	Rate	Amount
0128	Mate	Day	0.04	138.45	5.54
9999	Hire and running charges of mixer	L.S.	26.91	1.00	26.91
9999	Sundries	L.S.	13.52	1.00	13.52
9999	Hire charges of steel moulds, table vibrators, rammers, bolts, nuts and washers etc.	L.S.	53.82	1.00	53.82
	TOTAL				1,413.58
	Cost or 1.00 cum				1,413.58
	Details of cost for a path of area 10.00 sqm. no. of blocks required for 10.00 sqm. = 108 nos.				
	(a) Concrete in blocks				
	(108x0.30x0.30x0.09 = 0.875 cum.)				
	(Rate as per sub analysis Marked 'Y')	cum	0.875	1413.58	1236.88
	(b) Labour for Surface excavation .				
0114	Beldar	Day	0.72	135.25	97.38
0115	Coolie	Day	0.60	135.25	81.15
	(c) For levelling course of fine sand				
6501	Jamuna sand	cum	0.10	175.00	17.50
2335	Carriage of Jamuna sand	cum	0.10	53.21	5.32
	Labour:				
0114	Beldar	Day	0.0089	135.25	1.20
0115	Coolie	Day	0.0107	135.25	1.45
0101	Bhishti	Day	0.0035	138.45	0.48
	(d) For finishing with 10mm thick cement plaster				
	1:3 qty. for 9.72sqm. cement mortar 1:3(1 Cement: 3 Coarse sand) (Rate as per item no. 3.8)	cum	0.0972	3 169.60	308.09
0155	Mason	Day	0.787	146.55	115.33
0115	Coolie	Day	0.787	135.25	106.44
0101	Bhishti	Day	0.262	138.45	36.27
9999	Scaffolding and sundries	L.S.	12.22	1.00	12.22
	(e) For laying blocks and filling joints with Jamuna sand for filling joints 5mm (av.) thick				
6501	Fine sand (Jamuna)	cum	0.005	175.00	0.88
2335	Carriage of fine sand	cum	0.005	53.21	0.27
0123	Mason 2nd class	Day	0.90	151.50	136.35
0115	Coolie	Day	1.98	135.25	267.80
0101	Bhishti	Day	0.05	138.45	6.92
	TOTAL				2431.93
	Add 1 % for water charges				24.32
	TOTAL				2,456.25
	Add 15% for contractor's profit and overheads				368.44
	Cost for 10sqm. or 0.9 cum.				2,824.69
	Rate per cum.				3,138.54
	Say				3,138.55

16.53 Providing and fixing concertina coil fencing with required dia 610 mm (having 50 nos round per 6 metre length) upto 3m height of wall with existing angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal R.B.T. stud tied with G.I.

staples and G.I. clips to retain horizontal including necessary bolts or G.I. barbed wire tied to angle iron all complete as per direction of Engineer-in-charge with reinforced barbed tape (R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm. with tape (0.52 mm thick) and weight 43.478gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30.00 m length				
	Materials :				
8691	Punched tape concertina coil 600 m dia. 10m openable length (Total length 90m) Therefore, Nos. of bundles 30/10=3bundles)	bundle	3 .00	650.00	1,950.00
8692	R.B.T. Reinforced Barbed Tape 9 rounds 9x30 = 270m	metre	270.00	7.50	2,025.00
8693	Turn buckle and strengthening bolt.	each set	10.00	35.00	350.00
9999	G.I. staples clips etc.	L.S.	49.40	1.00	49.40
	Labour				
	Labour for fixing straightening cutting of tape/ coils & wire				
0114	Beldar 0.50x2 = 1.00 Nos (Taken double due to height)	Day	1.00	135.25	135.25
0102	Blacksmith 1st class	Day	0.50	151.50	75.75
0103	Blacksmith 2nd class	Day	0.50	141.60	70.80
	Total				4,656.20
	Add 1% for water charges				46.56
	Total				4702.76
	Add 15% for contractor's profit and overheads.				705.41
	cost for 30.00 metre				5,408.17
	cost per metre				180.27
	Say				180.25

16.54 Providing and laying Dense Bituminous macadam on prepared surface with specified graded crushed stone aggregate for profile corrective base/ binding course including loading of aggregate with FE loader and hot mixing of stone aggregate, filler and bitumen in hot mix plant, transporting the mixed material by tippers to paver and laying the mixed material with paver finisher fitted with electronic sensing device to the required level and grade and rolling by road roller as per MORTH specifications, to achieve the desired density, but excluding the cost of primer / tack coat.

16.54.1 50/75mm average compacted thickness with bitumen of 60/70 grade @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 63.91 cum (or 147 M.T.) (A day's output of hot mix plant). Taking density 2.3 gm/ c.c. Gross weight of mix = 147 M.T.				
	Materials				
7309	Bitumen 60/70 grade	tonne	7.35	23,200.00	170,520.00
2211	Carriage of bitumen	tonne	7.35	53.21	391.09
	Crushed stone aggregate weight = 147.00 - 7.35 = 139.65 M.T.				

Code	Description	Unit	Quantity	Rate	Amount
	Assuming density of stone aggregate 1427 kg/cum. 26.5-13.2mm@30% 13.2-2.8mm@28% Stone dust @ 40% Hydrate lime @ 2%				
0294	Crushed Stone Aggregate 26.5mm =30% x 139.65/1.427.	cum	29.36	675.00	19,818.00
0296	Crushed stone Aggregate 13.2.5mm = 28%x139.65/1.427.	cum	27.40	700.00	19,180.00
1159	Stone dust=40%xl39.65/l.523	cum	36.68	700.00	25,676.00
2202	Carriage of crushed stone aggregate.	cum	56.76	53.21	3,020.20
0777	Hydrated lime = 2%of 139.65 M.T. =2.793 M.T. or 27.93 Qtl.	quintal	27.93	177.00	4,943.61
2208	Carriage of Lime = 2.79 M.T./1.29 MT/cum= 2.16 cum	cum	2.16	53.21	114.93
2267	Carriage of Stone dust	cum	36.68	53.21	1,951.74
	(B) Labour charges Labour required for loading platform, paver and for taking level etc.				
0114	Beldar	Day	11.00	135.25	1,487.75
0113	Chowkidar	Day	3.00	135.25	405.75
0130	Mistry	Day	1.00	151.50	151.50
0101	Bhisti for road roller = 147/ (2.30x0.05x370)	Day	3.45	138.45	477.65
	(C) Machinery/ Hire charges: Assuming efficiency as 60%, 7 hours working, Capacity 35 tonne (avg.) per hours Qty. of asphalt = 7x35x60/100 = 147 MT				
0008	Hire charges of B.G. Plant.	Day	1.00	7,050.00	7,050.00
0017	Hire charges of tipper = 147/(5.19x8)=3.54 no.	Day	3.54	1,030.00	3,646.20
0045	Slip form paver with sensor	Day	1.00	12,000.00	12,000.00
0018	Hire charges of loader	Day	1.00	800.00	800.00
0003	Road roller (Density = 2.30 M.T./Cum.) One roller compacts 370 sqm/day	Day	3.45	1,000.00	3,450.00
	(D) Fuel charges: Two engines for hot mix plant and one for Paver finisher @ 4 ltr./ engine / hr. and 7 Hours working=3x4x7=84.00 litres For drier, premixing and heating materials: Taking efficiency as 96% =96/100x147=141.12 M.T. 141.12M.T.@ 5 ltr./M.T. =705.60 litres One steam burner is to start two hours earlier to heat up the plant at high flames, there fore diesel required for two hours per day @ 20 ltr. Per hours =2x20 = 40.00 litres. Then flames are reduced and required to burn for 7 hrs @ 10 ltr./ hrs =7x10 = 70.00 litres Diesel for road roller =3.45 days @ 18 ltr./ day = 62.10 litre. Diesel for loader @ 11.25 ltr/each = 11.25 litres. Diesel for tipper As per DAR Vol. 1 lead 5 km., No. of trips=5.19 Nos. Diesel required = 11.58 ltrs and carrying capacity = 8 tonne.				

Code	Description	Unit	Quantity	Rate	Amount
	147.00x11.58/5.19x8. =41.00 litres				
	Total =1013.95 litre				
1235	Diesel oil	litre	1,013.95	30.25	30,671.99
9999	Carriage of diesel	L.S.	1,388.01	1.00	1,388.01
	Mobil oil:				
	For 41.52 M.T. = 0.414 ltr				
	For 147 M.T.=0.414/41.52xl47 = 1.47 ltr				
5001	Mobil oil	litre	1.47	95.00	139.65
	Total				307,284.07
	Add 1% for water charges				3,072.84
	Total				310,356.91
	Add 15% for contractor's profit and Overheads.				46,553.54
	Cost for 63.91 cum (147 M.T.)				356,910.45
	Cost per cum.				5,584.58
	Say				5,584.60

16.55 Providing and laying Bituminous Macadam on prepared surface with specified graded crushed stone aggregate for profile corrective base/ binder course including loading of aggregate with F.E. loader , hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material by tippers to paver and laying the mixed material with paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per MORTH specification to achieve the desired density and compaction but excluding the cost of primer/ tack coat.

16.55.1 50mm / 75mm average compacted thickness with bitumen of 60/70 grade @ 3.5% (Percentage by weight of total mix)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 66.81 cum				
	Materials				
7309	Bitumen 60/70-3.5% of 147 M.T.	tonne	5.15	23,200.00	119,480.00
2211	Carriage of bitumen	tonne	5.15	53.21	274.03
0294	Crushed stone Aggregate 26.5 mm @ 22% of 141.85x1/1.427.	cum	21.87	675.00	14,762.25
0296	Crushed stone Aggregate 13.2 mm @ 75% of 141.85x1/1.427	cum	74.55	700.00	52185.00
1159	Fine aggregate 2.8mm & below @ 3% of 141.85 x 1/1.427	cum	2.98	700.00	2,086.00
2202	Carriage of Stone aggregate 26.5 mm .	cum	21.87	53.21	1,163.70
2202	Carriage of Stone aggregate 13.2 mm	cum	74.55	53.21	3,966.81
2267	Carriage of fine aggregate 2.8mm.	cum	2.98	53.21	158.57
	Labour for loading platform, paver and taking levels etc.				
0114	Beldar	Day	5.00	135.25	676.25
0113	Chowkidar	Day	3.00	135.25	405.75
0130	Mistry	Day	1.00	151.50	151.50
0101	Bhisti for road roller	Day	3.61	138.45	499.80
0114	Beldar for taking levels	Day	6.00	135.25	811.50
	Machinery				
0008	Hire charges of B.G plant.	Day	1.00	7,050.00	7,050.00
0017	Hire charges of Tipper 147/(5.19x8) = 3.54	Day	3.54	1,030.00	3,646.20
0018	Hire charges of loader	Day	1.00	800.00	800.00
0003	Hire charges of Diesel Road Roller	Day	3.61	1,000.00	3,610.00
1235	Diesel	litre	1,016.83	30.25	30,759.11

Code	Description	Unit	Quantity	Rate	Amount
0045	Slip form paver with sensor	Day	1.00	12,000.00	12,000.00
9999	Carriage of Diesel.	L.S.	1,388.01	1.00	1,388.01
5001	Mobil oil	litre	1.47	95.00	139.65
	Total				256,014.13
	Add 1% for water charges.				2,560.14
	Total				258,574.27
	Add 15% for contractor's profit and overheads				38,786.14
	Cost for 66.81 cum				297,360.41
	Cost per cum				4,450.84
	Say				4,450.85

16.56 Providing and laying Dense Bituminous concrete on prepared surface with specified graded stone aggregate for wearing course including loading of aggregate with F.E. loader , and hot mixing of bitumen with filler and stone aggregate in hot mix plant , transporting the mixed material by tippers to paver and laying the mixed material with mechanical paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per MORTH specification, to achieve the desired density and compaction but excluding cost of primer/ tack coat.

16.56.1 40 mm/50mm compacted thickness with bitumen of grade 60/ 70 @ 5.5% and lime @3% (percentage by weight of total mix).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 147.00 MT (62.29 cum)				
	Material				
7309	Bitumen Grade 60/70, 5.5% of 147 M.T.Paving Asphalt 60/70 penetration	tonne	8.085	23,200.00	187,572.00
2211	Carriage of bitumen	tonne	8.085	53.21	430.20
0296	Stone Aggregate 13.2 mm.	cum	4.71	700.00	3,297 .00
0297	Stone Aggregate 11.2 mm.	cum	47.13	700.00	32,991.00
1159	Stone dust	cum	39.74	700.00	27,818.00
2202	Carriage of Stone aggregate .	cum	51.84	53.21	2,758.41
2267	Carriage of Stone dust	cum	39.74	53.21	2,114.57
0777	Dry hydrated lime 2 3% of 147 M.T.	quintal	44.10	177.00	7,805.70
2208	Machinery carriage of Hydredted lime	cum	3.42	53.21	181.98
0008	Hire charges of BG plant.	Day	1.00	7,050.00	7,050.00
0017	Hire charges of tipper	Day	3.54	1,030.00	3,646.20
0018	Hire charges of loader	Day	1.00	800.00	800.00
0003	Hire charges of Diesel Road Roller	Day	3.39	1,000.00	3,390.00
1235	Diesel	litre	998.17	30.25	30,194.64
9999	Carriage of Diesel.	L.S.	1348.88	1.00	1,348.88
5001	Mobil oil	litre	1.47	95.00	139.65
	Labour required for loading platform, paver and for taking level etc.				
0114	Beldar	Day	11.00	135.25	1,487.75
0113	Chowkidar	Day	3.00	135.25	405.75
0130	Mistry	Day	1.00	151.50	151.50
0101	Bhisti for road roller	Day	3.39	138.45	469.35
	Total				314,052.58
	Add 1 % for water charges				3,140.53
	Total				317,193.11
	Add 15% for contractor's profit and overheads.				47,578.97
	Cost for 62.29 cum				364,772.08
	Cost per cum				5,856.03
	Say				5,856.05

16.57 Providing and laying Dense Bituminous Concrete on prepared surface with specified graded stone aggregate for wearing course including loading of aggregate with F.E. loader, and hot mixing of bitumen with filler and stone aggregate in hot mix plant, transporting the mixed material by tippers to paver and laying the mixed material with mechanical paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per MORTH specifications, to achieve the desired density and compaction but excluding cost of primer/ tack coat.

16.57.1 40 mm/50mm compacted thickness with bitumen of grade CRMB - 60 @ 5.5% and lime @3% (percentage by weight of total mix).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 62.29 cum (or 147 M.T.) Taking density 2.36 gm/c.c. Gross weight of mix= 147 M.T.				
	Materials:				
7741	Modified Bitumen Refinery Produced CRMB- 60	tonne	8.085	26,300.00	212,635.50
2211	Carriage of bitumen	tonne	8.085	53.21	430.20
	Crushed stone aggregate and stone dust weight = 147-8.085-4.41=134.505 M.T. Taking density of stone aggregate as 1427kg./cum and density of stone dust as 1523kg./cum and taking stone aggregate 13.2mm @ 5% stone aggregate 11,2mm @ 50% and stone dust @ 45%				
0296	Stone Aggregate 13.2mm = 6.725 M.T.	cum	4.71	700.00	3,297.00
0297	Stone Aggregate 11.2mm = 67.253 M.T.	cum	47.13	700.00	32,991.00
1159	Stone dust =60.527 M.T.	cum	39.74	700.00	27,818.00
2202	Carriage of Stone aggregate	cum	51.84	53.21	2,758.41
2267	Carriage of Stone dust	cum	39.74	53.21	2,114.57
0777	Hydrated lime 147 M.T. @ 3%.	qunital	44.1	177.00	7,805.70
2208	Carriage of Lime 4.41/1.29 M.T./ cum= 3.42 cum	cum	3.42	53.21	181.98
	(B) Hire charges of machinery Assuming effciency as 60% 7 hours working, capacity 35 tonne (avg) per hours				
	Qty. of asphalt = 7x35x60/100=147 M.T.				
0008	Hire charges of B.G. Plant.	Day	1.00	7,050.00	7,050.00
0017	Hire charges of tipper = 147/(5.19x8)=3.54 No.	Day	3.54	1,030.00	3,646.20
0018	Hire charges of loader	Day	1.00	800.00	800.00
0003	Hire charges of Diesel Road Roller (62.29/0.04x460)	Day	3.39	1,000.00	3,390.00
	Fuel charges:				
	Two engines for hot mix plant and one for paver finisher @ 4 ltr./ enginer/ hr. and 7 hours working = 3x4x7 = 84.00 litres				
	For drier , premixing and heating materials: Taking efficiency as 94% =94/100x147=138.18M.T.				
	138.18 M.T. @ 5 ltr./m.T.= 690.90 litres				
	For burner				
	One steam, burner is to start two hours earlier to heat up the plant at high flames, there fore diesel required for tow hours per day @ 20 ltr. per hours =2x20=40.00 litres				
	Then flames are reduced and required to burn for 7 hrs. @ 10 ltr./ hrs=7x 10=70.00 litres				

Code	Description	Unit	Quantity	Rate	Amount
	Diesel for road roller = 3.39 days @ 18 ltr./ day = 60.02 litres. Diesel for loader @ 11.25 ltr/ each = 11.25 ltrs Diesel for tipper As per DAR Vol. 1 lead 5 km., No, of trips = 5.19 Nos. Diesel required = 11.58 ltrs and carrying capacity = 8 tonne 147.00x11.58/5.19x8,=41.00 ltrs				
1235	Total = 998.17 ltr	litre	998.17	30.25	30,194.64
9999	Carriage of diesel	L.S.	1348.88	1.00	1,348.88
	Mobil oil: For 41.52 M.T. = 0.414 ltr				
5001	For 147 M.T.= 0.414/41.52x147=1.47 ltr	litre	1.47	95.00	139.65
	(D) labour charge Labour required for loading platform, paver and for taking levels etc.				
0114	Beldar (5.00+6.00=11.00 Nos.)	Day	11.00	135.25	1,487.75
0113	Chowkidar	Day	3.00	135.25	405.75
0130	Mistry	Day	1.00	151.50	151.00
0101	Bhisti for road roller = 147/(2.36x0.04x460)	Day	3.39	138.45	469.35
	Total				339,116.08
	Add 1% for water charges				3,391.16
	Total				342,507.24
	Add 15% for contractor's profit and overheads.				51,376.09
	Cost for 62.29 cum				393,883.33
	Cost per cum				6,323.38
	Say				6,323.40

16.58 Providing and laying Dense Bituminous Concrete on prepared surface with specified graded stone aggregate for wearing course including loading of aggregate with F.E. loader, and hot mixing of bitumen with filler and stone aggregate in hot mix plant, transporting the mixed material by tippers to paver and laying the mixed material with mechanical paver finisher fitted with electronic sensing device to the required level and grade "and rolling with road rollers, as per MORTH specifications, to achieve the desired density and compaction but excluding cost of primer/ tack coat.

16.58.1 40 mm/50mm compacted thickness with bitumen of grade PMB - 40 @ 5.5% and lime @3% (percentage by weight of total mix).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 62.29 cum (or 147 M.T.) Taking density 2.36 gm/c.c. Gross weight of mix = 147 M.T. MATERIALS:				
0312	Bitumen grade PMB-40	tonne	8.085	30,000.00	242,550.00
2211	Carriage of bitumen	tonne	8.085	53.21	430.20
	Crushed stone aggregate and stone dust weight = 147-8.085-4.41 = 134.505 M.T. Taking density of stone aggregate as 1427kg./cum and density of stone dust as 1523kg./cum and taking stone aggregate 13.2mm @ 5% stone aggregate 11.2mm @ 50% and stone dust @ 45%				
0296	Stone Aggregate 13.2mm = 6.725 M.T.	cum	4.71	700.00	3,297.00

Code	Description	Unit	Quantity	Rate	Amount
0297	Stone Aggregate 11.2mm = 67.253 M.T.	cum	47.13	700.00	32,991.00
1159	Stone dust =60.527 M.T.	cum	39.74	700.00	27,818.00
2202	Carriage of Stone aggregate .	cum	51.84	53.21	2,758.41
2267	Carriage of Stone dust	cum	39.74	53.21	2114.57
0777	Hydrated lime 147 M.T. @ 3%.	quintal	44.10	177.00	7,805.70
2208	Carriage of Lime 4.41/1.29 M.T./ cum= 3.42 cum	cum	3.42	53.21	181.98
	(B) Hire charges of machinery				
	Assuming effciency as 60% 7 hours working, capacity 35 tonne (avg) per hours				
	Qty. of asphalt = 7x35x60/100=147 M.T.				
0008	Hire charges of B.G. Plant.	Day	1.00	7,050.00	7,050.00
0017	Hire charges of tipper = 147/(5.19x8)=3.54 No.	Day	3.54	1,030.00	3,646.20
0018	Hire charges of loader	Day	1.00	800.00	800.00
0003	Hire charges of Diesel Road Roller (62.29/0.04x460)	Day	3.39	1,000.00	3,390.00
	Fuel charges:				
	Two engines for hot mix plant and one for paver finisher @ 4 ltr./ enginer/ hr. and 7 hours working = 3x4x7 = 84.00 litres				
	For drier , premixing and heating materials:				
	Taking efficiency as 94%				
	=94/100xl47=138.18M.T.				
	138.18 M.T. @ 5 ltr./m.T.= 690.90 litres				
	For burner				
	One steam, burner is to start two hours earlier to heat up the plant at high flames, there fore diesel required for/two hours per day @ 20 ltr. per hours =2x20=40.00 litres				
	Then flames are reduced and required to burn for 7 hrs. @ 10 ltr./ hrs=7x 10=70.00 litres				
	Diesel for road roller = 3.39 days @ 18 ltr./ day = 60.02 litres.				
	Diesel for loader @ 11.25 ltr/ each = 11.25 ltrs				
	Diesel for tipper				
	As per DAR Vol. 1 lead 5 km., No, of trips = 5.19 Nos. Diesel required = 11.58 ltrs and carrying capacity = 8 tonne				
	147.00x11.58/5.19x8,=41.00 ltrs				
1235	Total = 998.17 ltr	litre	998.17	30.25	30,194.64
9999	Carriage of diesel	L.S.	1348.88	1.00	1348.88
	Mobil oil:				
	For 41.52 M.T. = 0.414 ltr				
5001	For 147 M.T.= 0.414/41.52x147=1.47 ltr	litre	1.47	95.00	139.65
	(D) labour charge				
	Labour required for loading platform, paver and for taking levels etc.				
0114	Beldar (5.00+6.00=11.00 Nos.)	Day	11.00	135.25	1487.75
0113	Chowkidar	Day	3.00	135.25	405.75
0130	Mistry	Day	1.00	151.50	151.50
0101	Bhisti for road roller = 147/(2.36x0.04x460)	Day	3.39	138.45	469.35
	Total				369,030.58
	Add 1% for water charges				3,690.31
	Total				372,720.89
	Add 15% for contractor’s profit and overheads.				55,908.13
					428,629.02
	Cost for 62.29 cum				6,881.19
	Cost per cum				6,881.20
	Say				

16.59 Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm alongwith theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up of M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours). Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing . specification and direction of Engineer-in-charge.

16.59.1 Mandatory/ Regulatory sign boards of 900mm dia- metre withpart as length of 3750mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details cost for 1 no. of 0.636 sqm Materials3.14/4x(0.90x0.90)= 0.636 sqm Aluminium sheet 2 mm thick add 10% wastage = 0.064 i.e. 0.700sqm @ 5.60kg/sqm = 3.92kg				
2704	Cost of Aluminium sheet 2mm thick.	kilogram	3.92	195.00	764.40
2302	Carriage of aluminium sheet 3.92kg or 0.00392 M.T.	tonne	0.00392	47.29	0.19
	High intensity retro reflective sheet = 0.70 sqm. High intensity sheet for lettering / sign and border etc. Taking 40% Area =0.28sqm,total = 0.70 + 0.28= 0.98 sqm				
8690	High intensity retro - reflective sheet.	sqm	0.98	1,400.00	1,372.00
	Steel work Supporting frame 25x25x3mm for 900mm dia board:- 3.14D=3.1416x0.90=2.83 metre @1.10kg/m =3.11kg Angle iron 35x35x.5mm for fixing the support frame with vertical Tee-iron support post 2x0.05=0.10m @ 2.6 kg/m = 0.26kg Vertical post of M.S. tee of section ISNT 50x50x6mm = 3.75 metre @4.50kg/m= 16.88 kg Base plate to be welded at bottom end of tee (As hold fast) (100xl00x5mm)x7850/69)=0.39kg, total = 3.11 + 0.26 +16.88 + 0.39 = 20.64kg. Add wastage @ 5% = 1.03 Total = 20.64 + 1.03 = 21.67kg.				

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no 10.2	kg.	21.67	46.35	1004.40(A)
	Labour.				
0128	Mate	Day	0.01	138.45	1.38
0114	Beldar	Day	0.25	135.00	33.81
9999	Cost of material for drilling holes, nut bolts & rivets, fabrication etc.	L.S.	65.00	1.00	65.00
	Painting with synthetic enamel paint on steel work support frame 25x25x3mm =2.83x0.10=0.283 sqm Fixing angle 35x35x5mm = 2x0.50x0.14=0.014 sqm Vertical post Tee 50x50x6mm =3.75x0.20=0.750sqm Baseplate 100xl00x5mm Surface area = 2x[0.10x0.10] =0.02 4x0.10x0.005 = 0.002 total = 1.069 sqm				
	Rate as per item no 13.61.1 of SH : Finishing (A).	sqm	1.07	35.35	37.82(A)
	Painting with epoxy paint on back side of aluminium sheet.	sqm	0.636	75.25	47.86(A)
	Rate as per Item no. 13.52.1				
9999	Sundries and hold fast etc.	L.S.	78.00	1.00	78.00
	Total				3404.86
	Add for water charge @ 1% except on (A).				23.15
	Total				3428.01
	Add for contractor's profit and overheads @ 15% except on (A).				350.69
	Cost of 1 no.				3778.70
	Say				3778.70

16.59 Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm alongwith theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up of M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours). Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing . specification and direction of Engineer—in-charge.

16.59.2 Cautionary /warning sign boards of equilateral triangular shape having each side of 900mm with support length of 3650mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details cost for 1 board of 0.35 sqm Materials Area 1/2x(0.90x0.78)= 0.35 sqm Aluminium sheet 2 mm thick add 10% wastage = 0.04 i.e. 0.39sqm @ 5.60kg/sqm = 2.18kg				
2704	Cost of Aluiminium sheet 2mm thick.	kilogram	2.18	195.00	425.10
	Carriage of sheet				
2302	2.18kg or 0.00218 M.T.	tonne	0.00218	47.29	0.10
	High intensity retro reflective sheet = 0.39 sqm. High intensity sheet for lettering / sign/ symbol/ border etc. Taking 40% Area =0.16sqm, total = 0.39 + sqm 0.16 = 0.55 sqm				
8690	High intensity retro - reflective sheet.	sqm	0.55	1400.00	770.00
	Steel work Angle iron frame 25x25x3mm 3x0.90=2.70 metre @ 1.10kg/m =2.97kg Angle iron 35x35x0.50mm for fixing the support frame to Tee- iron support post 2x0.05=0.10m @ 2.6 kg/m = 0.26kg Vertical post of M.S. tee of section ISNT 50x50x6mm = Ix3.65=3.65m @ 4.50kg/m= 16.43kg Base plate 100x100x5mm connected to bottom end of vertical tee. (0.10x0.10x0.005x7850kg =0.39kg, total = 2.97 + 0.26 + 16.43 + 0.39 = 20.05kg. Add wastage @ 5% = 1.00, total = 20.05 + 1.00 = 21.05kg				
	Rate as per item no 10.2	kg	21.05	46.35	975.67 (A)
	Labour.				
0128	Mate	Day	0.01	138.45	1.38
0114	Beldar	Day	0.25	135.25	33.81
9999	Cost of material for drilling holes, nut bolts & rivets, fabrication etc.	L.S.	65.00	1.00	65.00
	Painting with synthetic enamel paint on Angle iron . support frame 25x25x3mm =1x2.7x0.10=0.27 sqm. Angle 35x35x5mm = 2x0.50x0.14=0.014 sqm Tee 50x50x6mm = 1x3.65x0.20 =0.73sqm Base plate to be welded at bottom end of Tee 100xl00x5mm 0.022 sqm Total = 1.036 sqm				
	Rate as per item no 13.61.1 Finishing Painting with epoxy paint on back side of aluminium sheet. 0.35 sqm	sqm	1.036	35.35	36.62

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per Item no. 13.52.1	sqm	0.35	75.25	26.34
9999	Sundries & hold fast etc.	L.S.	65.00	1.00	65.00
	Total				2399.02
	Add for water charges @ 1% except on (A).				13.60
9999	Total				2412.62
	Add for contractor's profit and overheads @ 15% except on (A).				206.10
	Cost of 1 board.				2618.72
	Say				2618.70

16.60 Manufacturing supplying and fixing retro reflective overhead signage boards made up of 2mm thick aluminium sheet face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows alongwith theft resistant measures including the cost of painting with two'or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge. (Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).

16.60.1 Overhead informatory road signage.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for boards area 3.00x1.20=3.60 sqm				
2704	Aluminium sheet 2mm thick =3.60 sqm@ 5.60kg/sqm = 20.16 kg	kilogram	21.17	195.00	4128.15
	Add 5% wastage = 1.01 kg=				
	Total 20.16+1.01=21.17 kg				
2302	Carnage of sheet.	tonne	0.02117	47.29	1.00
	(b) High intensity retro reflective sheet. 3.60 sqm				
8690	high itensity sheet for written matter.				
	Taking 40% = 3.60x40% = 1.44 sqm.				
	Total = 3.60 + 1.44 = 5.04 sqm.				
0588	High intensity retro - reflective sheet.	sqm	5.04	1400.00	7056.00
	(c) C.P. Brass rivets screws etc.				
	for peripheries = 2x(300+120)/30=28 nos.				
	For vertical Rows = 2x (120/30-2)=4 nos.				
	Total= 28 + 4 = 32nos.				
	For wastage @ 5% =2 nos.				
	Total = 32 +2 = 34 nos.				
	Chromium plated Brass screws 25 mm	100 Nos	34.00	83.00	28.22
	Labour charges for drilling holes				
9999	Hire charges of drill machine and sundries	L.S.	52.00	1.00	52.00
9999	Hoisting board	L.S.	390.00	1.00	390.00

Code	Description	Unit	Quantity	Rate	Amount
	Labour charges for manufacturing of board including.				
9999	fixing retro reflective sheet	L.S.	564.20	1.00	564.20
	Painting with epoxy paint on back side of Aluminium sheet, Rate as per Item no. 13.52.1	sqm	3.60	75.25	270.90(A)
	Total				12,490.47
	Add for water charge @ 1% except on (A).				122.20
	Total				12,612.67
	Add for contractor's profit and overheads 15% except on (A).				1851.27
	Cost of 3.60 sqm				14,463.94
	Cost of 1 sqm.				4,017.76
	Say				4,017.75

16.61 Providing Retro-reflective regulatory sign board of size 900mm dia meter made out of 2mm thick aluminium sheet, face to be fully covered with high intensity encapsulated lens type retro -reflective sheeting as approved by Engineer-in-charge. Letter , symbols, borders etc. will be as per IRC - 67 with required colour scheme on the boards and with the high intensity grade A. The aluminium sheet to be riveted to M.S. frame of angle iron of stze 40x40x4mm The boards will be fixed to 1 No. 50x50mm square post made of M.S. angle 50x50x4m, 4m long welded to the frame with adequate anti-theft arrangement .Sheet work to be painted with two or more coats of synthetic enamel paint over an under coat (primer) and back side of aluminium sheet to be painted with two or more coats of epoxy paint including appropriate priming coat complete in all respects as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details cost for one board of 0.635 sqm Aluminium sheet 2mm thick = 0.635 sqm. Add 10% wastage = 0.06 sqm, total = 0.635 + 0.06 = 0 695 sqn Say 0.70 sqm @ 5.60 kg/sqm =3.98 kg				
2704	Cost of Alummiurfi sheet 2mm thick (X).	kilogram	3.98	195.00	776.10
	High intensity retro reflective sheet = 0.70 sqm high intensity sheet for lettering/ sing and border etc. Taking 40% Area=0.28 sqm, total = 0.70 + 0.28 = 0.98 sqm.				
8690	High intensity retro - reflective sheet (Y).	sqm	0.98	1400.00	1,372.00
	Angle iron 40x40x4mm = 4x0.60=2.40@ 2.4kg/ mtr = 5.76 kg 50x50x5 mm = 2x4m =8m @ 3kg/ mtr =24.00 kg Total = 5.76 + 24.00 = 29.76 kg				
	(A) Rate as per item no 10.2	kg	29.76	46.35	1,379.38(A)
	Labour.				
0128	Mate	Day	0.01	138.45	1.38
0114	Beldar	Day	0.25	135.25	33.81
9999	Cost of material for drilling holes, nut bolts & rivets, facrication etc. @ 2% on (X+Y+A)	L.S.	70.23	1.00	70.23

Code	Description	Unit	Quantity	Rate	Amount
	Painting with synthetic enamel paint 1x2.40x0.12=0.29 sqm 1x4.00x0.12=0.80 sqm, total = 0.29 + 0.80 = 1.09 sqm				
	Rate as per item no 13.61.1	sqm	1.09	35.35	38.53(A)
	Painting with epoxy paint on back side of aluminium sheet, Rate as per Item no.13.52.1	sqm	0.635	75.25	47.78
9999	Sundries & hole fast etc,	L.S.	31.20	1.00	31.20
	Total				3750.41
	Add 1% for water charges except on (A).				22.85
	Total				3773.26
	Add 15% for contractor's profit and overheads except on (A).				346.14
	Cost for 1 board				4119.40
	Say				4119.40

16.62 Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour ,T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm (Area covered on one day):- Materials Thermoplastic paint screeded in paint form for 2.5 mm thick road making stripe including glass beads etc. as pe specifications. 100sqm @ 5kg/5sqm =500kg. wastage @ 5% =25 kg Total = 525 kg				
8687	Thermoplastic paint Glass beads (B-class) to be sprayed over the paint stripe @ 250 gms. Per sqm = 100x0.25=25 kg	kg	525 .00	67.22	35,290.50
8688	Glass beads MACHINERY	kg	25.00	68.00	1,700.00
0033	Hiring charges of paint applicator machine	per day	1.00	680.00	680.00
0005	Hire charges of trucks for local shifting.	Day	1.00	1008.00	1,008.00
1241	LPG cylinder of heating (Commercial cylinder of 19.00 kg capacity) Labour	kg	71.06	35.00	2 487.10
0157	Machine operator.	Day	1.00	166.00	166.00
0139	Skilled labour.	Day	4.00	138.45	553.80
9999	Labour for cleaning for road surface.	L.S.	364.00	1.00	364.00
0114	Beldar for erecting barricades, traffic diversions, stretching ropes etc.	Day	4.20	135.25	568.05
	Total				42,817.45
	Add 1% for water charges.				428.17
	Total				43,245.62
	Add 15% for contractor's profit and overheads.				6,486.84

Code	Description	Unit	Quantity	Rate	Amount
	Cost for 100 sqm				49,732.46
	Cost per sqm				497.32
	Say				497.30

16.63 Providing and laying and making kerb channel 30cm wide and 50mm thick of cement concrete 1:3:6 (1 cement:3 coarse sand:6 graded stone aggregate 20mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth etc. complete and as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm.				
	Meterials				
0287	Brick Aggregate 40 mm nominal size	cum	1.00	360.00	360.00
2260	Carriage of Brick Aggregate	cum	1.00	57.83	57.83
6501	Jamuna sand	cum	0.08	175.00	14.00
2335	Carriage of Jamuna sand	cum	0.08	53.21	4.26
	Labour for spreading, ramming and consolidation.				
0114	Beldar	Day	0.35	135.25	47.34
0115	Coolie	Day	0.26	135.25	35.16
0101	Bhisti	Day	0.18	138.45	24.92
	Cement concrete-1:3:6 (Rate as per item no. 4.1.6)	cum	0.50	2,713.05	1,356.53(A)
	Total				1,900.04
	Add for water charge @ 1 % except on (A).				5.44
	Total				1,905.48
	Add for contractor's profit and overheads @ 15% except on (A).				82.34
	Cost for 10 sqm.				1,987.82
	Cost for 1 sqm.				198.78
	Say				198.80

16.64 Providing and laying 75mm thick compacted bed of dry brick aggregate of 40mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand including finishing smooth etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm.				
	Meterials				
0287	Brick Aggregate 40 mm nominal size	cum	1.00	360.00	360.00
2260	Carriage of Brick Aggregate	cum	1.00	57.83	57.83
6501	Jamuna sand	cum	0.08	175.00	14.00
2335	Carriage of Jamuna sand	cum	0.08	53.21	4.26
	Labour for spreading, ramming and consolidation.				
0114	Beldar	Day	0.35	135.25	47.34
0115	Coolie	Day	0.26	135.25	35.16
0101	Bhisti	Day	0.18	138.45	24.92
	Total				543.51
	Add for water charge @ 1 % except on (A).				5.44
	Total				548.95

Code	Description	Unit	Quantity	Rate	Amount
	Add for contractor's profit and overheads @ 15% except on (A).				82.34
	Cost for 10 sqm.				631.29
	Cost for 1 sqm.				63.13
	Say				63.15

16.65 Providing and fixing post delineators (made of ABS body fitted with 2 nose 100mm dia) reflective and reflectors are mounted on MS pipe of 65mm dia dully powder coated anti-rust steel to be installed as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 no.				
	Materials.				
8685	Delinator	each	1.00	560.00	560.00
9999	Fixing charges.	L.S.	78.00	1.00	78.00
9999	Fixing material	L.S.	39.00	1.00	39.00
	Total				677.00
	Add for water charges @ 1%				6.77
	Total				683.77
	Add for contractor's profit and overheads@ 15%				102.57
	cost of 1 no.				786.34
	Say				786.35

16.66 Excavating holes upto 0.10 cum including getting out the excavated soil, then returning the soil as deported in layers not exceeding 20cm in depth including consolidating and deposited layer by ramming watering etc. Disposing of surplus excavated soil as directed with in a lead of 50m and lift upto 1.5 m.

16.66.1 All kind of soil.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 holes-				
	Earth work 30x0.10=3.00 cum				
	Extra labour for fillng and ramming				
	(A) Rate vide item no. 2.8.1	cum	3.00	103.40	310.20(A)
9999	(B) Sundries	L.S.	13.52	1.00	13.52
	TOTAL				323.72
	Add for water charges @ 1% except on (A)				0.14
	TOTAL				323.86
	(C) Add for contractor's profit and over-heads@ 15%except on (A).				2.05
	Cost of 30 holes				325.91
	Cost of 1 hole				10.86
	Say				10.85

16.67 Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50mm (HPL or equivalent) including reinforcement with 6mm dia M.S. bars 4 nose on each side including setting in position in footpath to the required level and line over a bed of 20mm average thick cement

mortar 1:3 (1 cement : 3 coarse sand) having thickness not more than 5mm except on curve including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	Materials				
8694	Precast pavement slab 450 x 450 x 50mm (M-30)	each	48.00	40.00	1920.00
9999	carriage of slab	L.S.	52.00	1.00	52.00
	20mm (bed and joints) CM. 1:5 (1 cement: 5 coarse sand (Rate as per item no. 3.10 of SH. morter	cum	0.25	2260.15	565.04(A)
	Labour				
0155	Mason.	Day	1.10	146.55	161.21
0100	Bandhani	Day	1.10	138.45	152.30
0114	Beldar	Day	0.55	135.25	74.39
0101	Bhisti	Day	0.27	138.45	37.38
9999	Sundries	L.S.	10.79	1.00	10.79
	Total				2,973.11
	Add for water charges @ 1 % except on (A).				29.73
	Total				3002.84
	Add for contractor's profit and overheads's @ 15% except on (A).				450.43
	Cost for 10 sqm.				3,453.27
	Cost for 1 sqm				345.33
	Say				345.35

16.68 Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including 50mm thick compacted bed of Fine sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	Materials.				
8689	Interlocking C.C. paver block (60 mm thick), M.30				
	Bedding Layer 50mm thick	sqm	10.00	225.00	2,250.00
0982	Coarse sand =10x0.050=0.50 cum	cum	0.50	600.00	300.00
2203	Carriage of coar sand	cum	0.50	53.21	26.60
0983	Fine sand .	cum	0.15	320.00	48.00
2261	Carriage of fine sand	cum	0.15	53.21	7.98
	Laying charges (Bassed on actual observation)				
0123	Mason -1st class	Day	0.50	151.50	75.75
0124	Mason -2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	1.00	135.25	135.25
0115	Coolie	Day	0.50	135.25	67.62
	Total				2,982.00
	Add for water charge @ 1%				29.82
	Total				3,011.82
	Add for contractor's profit and overheads @ 15%				451.77
	Cost for 10.00 sqm				3,463.59
	Cost for 1.00 sqm.				346.36
	Say				346.35

16.69 Providing and laying at or near ground level factory made kerb stone of M-25 grade cement in position to the required line, level and curvature jointed with cement mortar 1:3(1 cement: 3 coarse sand) including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 metre i.e. 100x0.375x0.20=7.50 cum.				
	No. of kerb stones = 100/0.405=247 Nos				
8686	Precast C.C. Kerb stone M - 25 = 247x0.40x0.375x0.20=7.41 cum	cum	7.41	3500.00	25,935.00
	morter 1:3 for fixing joints =246x[(0.115+0.20)/2]x0.375x0.005 = 0.073 cum				
	CM.1 :3 (1 cement: 3 coarse sand) as per item no. 3.8 of SH mortar	cum	0.073	3169.60	231.38
	Labour for fixing of Kerb stone				
0123	Mason 1 st class	Day	2.50	151.50	378.75
0124	Mason 2nd class	Day	2.50	141.60	354.00
0114	Beldar	Day	2.50	135.25	338.12
0115	Coolie	Day	1.65	135.25	223.16
	Total				27,460.41
	Add for water charge @ 1%				274.60
	Total				27,735.01
	Add for contractor's profit and overheads @ 15%				4,160.25
	Cost of 7.50 cum				31,895.26
	cost for 1 cum.				4,252.70
	Say				4,252.70

16.70 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50mm including strengthening with 2mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.

16.70.1 Made of G.I. wire of dia 4mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Material.				
	G.I. chain link 50x50 mm mesh = 10.00 sqm.				
	Wastage5% = 0.50sqm				
	Total= 10.50 sqm				
8695	Chain link fabric fancing mesh of size 50x50mm made of G.I. wire of dia. 4mm.	sqm	10.50	225.00	2,362.50
9999	Carriage.	L.S.	156.00	1.00	156.00
	Labour				
0103	Blacksmith 2nd class	Day	2.14	141.60	303.02
0114	Beldar	Day	1.62	135.25	219.10
9999	Sundries including G.I. wire, nuts and bolts and warshers.	L.S.	174.75	1.00	174.75
	Total				3,215.37
	Add 1% for water charges.				32.15
	Total				3,247.52

Code	Description	Unit	Quantity	Rate	Amount
	Add 15% for contractor's profit and overheads.				487.13
	Cost for 10 sqm.				3,734.65
	Cost for 1 sqm.				373.47
	Say				373.45

16.70 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50mm including strengthening with 2mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.

16.70.2 Made of G.I. wire of dia. 4mm, PVC coated to achieve outer dia. not less than 5mm in required colour and shade.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm.				
	Material.				
	G.I. chain link 50x50 mm mesh PVC coated = 10sqm				
	wastase@5%= 0.50 sqm				
	Total = 10.50 sqm.				
8696	Chain link fabric fancing mesh of size 50x50mm made of G.I. wire of dia. 4mm, PVC coated to outer dia. 5mm.	sqm	10.50	250.00	2,625.00
9999	Carriage.	L.S.	156.00	1.00	156.00
	Labour				
0103	Blacksmith 2nd class	Day	2.14	141.60	303.02
0114	Beldar	Day	1.62	135.25	219.10
9999	Sundries including G.I. wire, nuts and bolts and warshers.	L.S.	174.75	1.00	174.75
	Total				3,477.87
	Add 1% for water charges.				34.78
	Total				3,512.65
	Add 15% for contractor's profit and overheads.				526.90
	Cost for 10 sqm.				4,039.55
	Cost for 1 sqm.				403.96
	Say				403.95

16.71 Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia. 3mm including strengthening with 2mm dia. wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm.				
	Material.				
	G.I. chain link 25x25 mm mesh = 10.00 sqm.				
	wastase@5%= 0.50 sqm				
8697	Cham link fabric fancing mesh of size 25x25mm made of G.I. wire of dia. 3mm.	sqm	10.50	300.00	3,150.00
9999	Carriage.	L.S.	156.00	1.00	156.00
	Labour				
0103	Blacksmith 2nd class	Day	2.14	141.60	303.02
0114	Beldar	Day	1.62	135.25	219.10

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries including G.I. wire, nuts and bolts and warshers.	L.S.	174.75	1.00	174.75
	Total				4,002.87
	Add 1% for water charges.				40.03
	Total				4,042.90
	Add 15% for contractor's profit and overheads.				606.43
	Cost for 10 sqm.				4,649.33
	Cost for 1 sqm.				464.93
	Say				464.95

16.72 Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 2.25 cum				
	MATERIALS				
1158	22.5 cm thick stone (Hard)	cum	2.25	332.00	747.00
2215	Carriage by mechanical transport i/c loading unloading and stacking	cum	2.25	62.60	140.85
	TOTAL				887.85
	Add1% for water charges				8.88
	TOTAL				896.73
	Add 15% for contractor's profit and overheads				134.51
	Cost for 2.25 cum				1,031.24
	Cost for one cum				458.33
	Say				458.35

16.73 Dry stone pitching 22.5cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20cm including preparing the bedding surface etc. all complete. (Payment for Stone to be made separately)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10.00 sqm				
	LABOUR				
0123	Mason 1st class.	Day	1.08	151.50	163.62
0124	Mason 2nd class.	Day	1.08	141.60	152.93
0114	Belder	Day	2.15	135.25	290.79
0115	Coolie	Day	1.61	135.25	217.75
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				831.85
	Add 1 % for water charges				8.32
	TOTAL				840.17
	Add 15% for contractor's profit and overheads				126.03
	Cost for 10 sqm				966.20
	Cost for one sqm				96.62
	Say				96.60

16.74 75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with:

16.74.1 Moorum

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm				
	MATERIALS				
0810	Moorum.	cum	7.50	310.00	2325.00

Code	Description	Unit	Quantity	Rate	Amount
2265	Carriage by mechanical transport i/c loading unloading and stacking	cum	7.50	53.21	399.08
	LABOUR				
0114	Beldar	Day	1.64	135.25	221.81
0101	Bhisti	Day	0.13	138.45	18.00
	TOTAL				2,963.89
	Add 1% for water charges				29.64
	TOTAL				2,993.53
	Add 15% for contractor's profit and overheads				449.03
	Cost for 100 sqm				3,442.56
	Cost per sqm				34.43
	Say				34.45

16.74 75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with:

16.74.2 Stone aggregate 20 mm nominal size.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 100.00sqm				
	MATERIALS				
0295	Stone aggregate 20mm nominal size 100sqm x7.50cm= 7.50 cum	cum	7.50	700.00	5,250.00
2202	Carriage of stone aggregate 20mm nominal size	cum	7.50	53.21	399.08
	LABOUR				
0114	Beldar	Day	2.05	135.25	277.26
0101	Bhisti	Day	0.13	138.45	18.00
	TOTAL				5,944.34
	Add 1 % for water charges				59.44
	TOTAL				6,003.78
	Add 15% for contractor's profit and overheads				900.57
	Cost for 100 sqm				6,904.35
	Cost per sqm				69.04
	Say				69.05

16.74 75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with:

16.74.3 Stone aggregate 40 mm nominal size.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 100.00 sqm				
	MATERIALS				
0293	Stone aggregate .40 mm nominal size 100sqm x7.50cm= 7.50 cum	cum	7.50	650.00	4875.00
2206	Carriage of stone aggregate 40mm nominal size .	cum	7.50	57.83	433.72
	LABOUR				
0114	Beldar	Day	2.05	135.25	277.26
0101	Bhisti	Day	0.13	138.45	18.00
	TOTAL				5603.98
	Add 1 % for water charges				56.04
	TOTAL				5660.02
	Add 15% for contractor's profit and overheads				849.00
	Cost for 100 sqm				6509.02
	Cost per sqm				65.09
	Say				65.10

16.75 Providing and laying C.C. pavement of mix M25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum				
	MATERIALS				
	Ready mix concrete M 25 = 1.00 cum. i/c placing of concrete, vibrating, leveling etc. (Rate as per item No. 5.37 of SH. R.C.C.	cum	1.00	4356.50	4356.50 (A)
9999	Operational charges for vacuum dewatering system i/c screed vibration , placing of filter mat, top mat, vacuum process, floating , troweling, Brooming etc.	L.S.	57.20	1.00	57.20
9999	T& P charges i/c consumable power charges, loading , unloading and hire charges of equipments	L.S.	41.60	1.00	41.60
	Total				4 455.30
	Add for water charges @ 1% on all except on (A)				0.99
	Total				4 456.29
	Add for contractor's profit and overheads @ 15% on all except (A)				14.97
	Cost for 1 cum				4 471.26
	Say				4 471.25

16.76 Deduct for using of M 20 grade concrete instead of M-25 grade concrete in C.C. pavement.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum.				
	Cement for M-25 mix = 0.410 t				
0367	Cement for M- 20 mix = 0.383 t				
	Difference	tonne	0.027	4500.00	121.50
2209	Carriage of Cement	tonne	0.027	47.29	1.28
	Plasticizer for M-25 mix = 2.050kg				
	Plasticizer for M- 20 mix= 1.915 kg				
7318	Difference = 0.135 kg	kilogram	0.135	30.00	4.05
	Total				126.83
	Add 1% for water charges				1.27
	Total				128.10
	Add for contractor's profit and overhead @ 15%				19.22
	Cost for 1 cum.				147.32
	Say				147.30

16.77 Scarifiying the existing bituminous road surface to depth of 50mm and disposal of scarified material withyin all lifts and lead upto 1000 metre (by mechanincal means).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100.00 sqm				
	LABOUR				
0128	Mate	Day	0.01	138.45	1.38
0114	Beldar	Day	0.25	135.25	33.81

Code	Description	Unit	Quantity	Rate	Amount
	MACHINERY				
0038	Tractor with ripper attachment.	per day	0.01	1000.00	10.00
0014	Front end loader	Day	0.025	6000.00	150.00
0017	Hire and runining charges of tipper	Day	0.02875	1030.00	29.61
	TOTAL				224.80
	Add for water charges 1%				2.25
	total				227.05
	Add 15% for contractor's profit and overhead				34.06
	Cost for 100 sqm				261.11
	Cost for 1 sqm				2.61
	Say				2.60

SUB HEAD : 17.0

SANITARY INSTALLATIONS

17.1 Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :

17.1.1 White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pan				
	MATERIALS				
1,954	White Vitreous china Orrisa pattern W.C. pan	each	1.00	700.00	700.00
7,358	10 litre low level P.V.C. flushing cistern with fitting accessories and flush pipe	each	1.00	570.00	570.00
1,896	100 mm Sand C.I. 'P' or'S' trap with vent horn	each	1.00	260.00	260.00
9,999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9,999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.25	151.50	189.38
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				1,984.20
	Add 1 % for water charges				19.84
	TOTAL				2,004.04
	Add 15% for contractor's profit and overheads				300.61
	Cost for 1 pan				2,304.65
	Say				2,304.65

17.1 Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :

17.1.2 Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pan				
	MATERIALS				
7805	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724mm X 578mm	each	1.00	3,350.00	3,350.00
7358	10 litre low level P.V.C. flushing cistern with fitting accessories and flush pipe	each	1.00	570.00	570.00
1896	100 mm Sand C.I. 'P' or'S trap with vent horn	each	1.00	260.00	260.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.25	151.50	189.38
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				4,634.20
	Add 1% for water charges				46.34
	TOTAL				4,680.54
	Add 15% for contractor's profit and overheads				702.08
	Cost for 1 pan				5,382.62
	Say				5,382.60

17.2 Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :

17.2.1 W.C. pan with ISI marked white solid plastic seat and lid

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pan				
	MATERIALS				
1875	White solid plastic seat and lid with C.P. brass hinges and rubber buffers complete	each	1 .00	275.00	275.00
1955	White vitreous china pedestal type W.C. pan	each	1.00	554.00	554.00
7358	10 litre low level C.I. flushing cistern with fitting accessories and flush pipe	each	1.00	570.00	570.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.25	151.50	189.38
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				1,853.20
	Add 1% for water charges				18.53
	TOTAL				1,871.73
	Add 15% for contractor's profit and overheads				280.76
	Cost for 1 pan				2,152.49
	Say				2,152.50

17.2 Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :

17.2.2 W.C. pan with ISI marked black solid plastic seat and lid

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pan				
	MATERIALS				
1876	Black solid plastic seat and lid with C.P.brass hinges and rubber buffers complete	each	1.00	250.00	250.00
1955	White vitreous china pedestal type W.C. pan	each	1.00	554.00	554.00
7358	10 litre low level C.I. flushing cistern with fitting accessories and flush pipe	each	1.00	570.00	570.00
9999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.25	151.50	189.38
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				1,828.20
	Add 1% for water charges				18.28
	TOTAL				1,846.48
	Add 15% for contractor's profit and overheads				276.97
	Cost for 1 pan				2,123.45
	Say				2,123.45

17.3 Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.3.1 W.C. pan with ISI marked white solid plastic seat and lid.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pan				
	MATERIALS				
1875	White solid plastic seat and lid with C.P. brass hinges and rubber buffers complete	each	1.00	275.00	275.00
1955	White glazed pedestal type W.C. pan	each	1.00	554.00	554.00
7006	10 litre white glazed vitreous china low level flushing cistern with fitting and bracket and 40 mm white C.P. flush bend	each	1.00	1,390.00	1,390.00
9999	Overflow arrangement and specials for oveflow pipe	L.S.	62.79	1.00	62.79
1350	Mosquito proof coupling of the approved municipal design	each	1.00	23.00	23.00
9,999	Plugs,screws etc.	L.S.	13.52	1.00	13.52
9,999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9,999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9,999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.00	151.50	151.50
0123	Mason 1st class	Day	1.00	151.50	151.50
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				2,826.50
	Add 1% for water charges				28.26
	TOTAL				2,854.76
	Add 15% for contractor's profit and overheads				428.21
	Cost for 1 pan				3,282.97
	Say				3,282.95

17.3 Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.3.2 W.C. pan with ISI marked black solid plastic seat and lid.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pan				
	MATERIALS				
1876	Black solid plastic seat and lid with C.P. brass hinges and rubber buffers complete	each	1.00	250.00	250.00
1955	Vitreous china pedestal type W.C. pan	each	1.00	554.00	554.00
7006	10 litre white vitreous china low level flushing cistern with fitting and bracket and 40 mm white C.P. flush bend	each	1.00	1390.00	1390.00
9999	Overflow arrangement and specials for oveflow pipe	L.S.	62.79	1.00	62.79

Code	Description	Unit	Quantity	Rate	Amount
1350	Mosquito proof coupling of the approved municipal design	each	1.00	23.00	23.00
9999	Plugs ,screws etc.	L.S.	13.52	1.00	13.52
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.00	151.50	151.50
0123	Mason 1st class	Day	1.00	151.50	151.50
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				2,801.50
	Add 1% for water charges				28.02
	TOTAL				2,829.52
	Add 15% for contractor's profit and overheads				424.43
	Cost for 1 pan				3,253.95
	Say				3,253.95

17.4 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.4.1 One urinal basin with 5 litre white P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1913	Flat back or angular lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively of white vitreous china	each	1.00	380.00	380.00
7359	5 litre PVC automatic flushing cistern with fitting	each	1.00	430.00	430.00
7375	Standard size G.I. Flush pipe with brass unions and clamps including C.P. brass spreaders	each	1.00	352.00	352.00
9999	Red lead, white lead and gasket	L.S.	13.52	1.00	13.52
9999	Plugs ,screws etc.	L.S.	13.52	1.00	13.52
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Painting of fittings etc.	L.S.	39.00	1.00	39.00
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	0.88	151.50	133.32
0123	Mason 1st class	Day	0.88	151.50	133.32
0114	Beldar	Day	1.50	135.25	202.88
	TOTAL				1,737.99
	Add 1% for water charges				17.38
	TOTAL				1,755.37
	Add 15% for contractor's profit and overheads				263.31
	Cost for one no				2,018.68
	Say				2,018.70

17.4 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.4.2 Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1913	Flat back or angular lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively of white glazed vitreous china	each	2.00	380.00	760.00
7359	5 litre PVC automatic flushing cistern with fitting	each	1.00	430.00	430.00
7376	Standard size G.I. Flush pipe with brass unions and clamps including C.P. brass spreaders	each	1.00	880.00	880.00
9999	Red lead, white lead and gasket	L.S.	20.28	1.00	20.28
9999	Plugs,screws etc.	L.S.	20.28	1.00	20.28
9999	Cement, sand and grit etc.	L.S.	20.28	1.00	20.28
9999	Painting of fittings etc.	L.S.	39.00	1.00	39.00
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.50	151.50	227.25
0123	Mason 1st class	Day	1.50	151.50	227.25
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				2,921.75
	Add 1% for water charges				29.22
	TOTAL				2,950.97
	Add 15% for contractor's profit and overheads				442.65
	Cost for one no				3,393.62
	Say				3,393.60

17.4 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.4.3 Range of three urinal basins with 10 litre white P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1913	Flat back or angular lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively of white vitreous china	each	3.00	380.00	1140.00
7361	10 litre PVC automatic flushing cistern with fitting	each	1.00	465.00	465.00
7377	Standard size G.I. Flush pipe with brass unions and clamps including C.P. brass spreaders	each	1.00	1070.00	1070.00
9999	Red lead, white lead and gasket	L.S.	33.67	1.00	33.67
9999	Plugs ,screws etc.	L.S.	33.67	1.00	33.67

Code	Description	Unit	Quantity	Rate	Amount
9999	Cement, sand and grit etc.	L.S.	33.67	1.00	33.67
9999	Painting of fittings etc.	L.S.	39.00	1.00	39.00
9999	Carriage of materials	L.S.	40.30	1.00	40.30
	LABOUR				
0116	Fitter 1st class	Day	2.00	151.50	303.00
0123	Mason 1st class	Day	2.00	151.50	303.00
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				3,867.06
	Add 1% for water charges				38.67
	TOTAL				3,905.73
	Add 15% for contractor's profit and overheads				585.86
	Cost for one no.				4,491.59
	Say				4,491.60

17.4 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.4.4 Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1913	Flat back or angular lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively of white vitreous china	each	4.00	380.00	1,520.00
7361	10 litre PVC automatic flushing cistern with fitting	each	1.00	465.00	465.00
7378	Standard size G.I. Flush pipe with brass unions and clamps including C.P. brass spreaders	each	1.00	1 530.00	1,530.00
9999	Red lead, white lead and gasket	L.S.	53.82	1.00	53.82
9999	Plugs,screws etc.	L.S.	53.82	1.00	53.82
9999	Cement, sand and grit etc.	L.S.	53.82	1.00	53.82
9999	Painting of fittings etc.	L.S.	39.00	1.00	39.00
9999	Carriage of materials	L.S.	53.82	1.00	53.82
	LABOUR				
0116	Fitter 1st class	Day	3.00	151.50	454.50
0123	Mason 1st class	Day	3.00	151.50	454.50
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				5,219.28
	Add 1% for water charges				52.19
	TOTAL				5,271.47
	Add 15% for contractor's profit and overheads				790.72
	Cost for one no				6,062.19
	Say				6,062.20

17.5 Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :

17.5.1 Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7379	Half stall urinals of white vitreous china with waste fittings	each	1.00	1224.00	1 224.00
7359	5 litre PVC automatic flushing cistern with fitting	each	1.00	430.00	430.00
1532	Standard size flush pipe with unions, spreaders and clamps all in C.P. brass	each	1.00	204.00	204.00
1891	50 mm diameter standard urinal C.I. Trap with vent arm outlet grating other couplings in C.P. brass	each	1.00	125.00	125.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	40.43	1.00	40.43
	LABOUR				
0116	Fitter 1st class	Day	1.75	151.50	265.12
0123	Mason 1st class	Day	2.00	151.50	303.00
0114	Beldar	Day	4 .00	135.25	541.00
	TOTAL				3,203.01
	Add 1% for water charges				32.03
	TOTAL				3,235.04
	Add 15% for contractor's profit and overheads				485.26
	Cost for one no.				3,720.30
	Say				3,720.30

17.5 Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :

17.5.2 Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7379	Two half stall urinals of white vitreous china with waste fittings	each	2.00	1,224.00	2,448.00
7359	5 litre PVC automatic flushing cistern with fitting	each	1.00	430.00	430.00
1533	Standard size flush pipe with unions, spreaders and clamps all in C.P. brass	each	1.00	333.00	333.00
1891	50 mm diameter standard urinal C.I. Trap with vent arm outlet grating other couplings in C.P. brass	each	1.00	125.00	125.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	53.82	1.00	53.82
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	53.82	1.00	53.82
	LABOUR				
0116	Fitter 1st class	Day	2.50	151.50	378.75
0123	Mason 1st class	Day	3.00	151.50	454.50
0114	Beldar	Day	6.00	135.25	811.50
	TOTAL				5,131.94
	Add 1% for water charges				51.32
	TOTAL				5,183.26
	Add 15% for contractor's profit and overheads				777.49
	Cost for one no.				5,960.75
	Say				5,960.75

17.5 Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :

17.5.3 Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7379	Three half stall urinals of white vitreous china with waste fittings	each	3.00	1,224.00	3,672.00
7361	10 litre PVC automatic flushing cistern with fitting	each	1.00	465.00	465.00
1534	Standard size flush pipe with unions, spreaders and clamps all in C.P. brass	each	1.00	415.00	415.00
1893	80 mm diameter standard urinal C.I. Trap with vent arm outlet grating other couplings in C.P. brass	each	1.00	158.00	158.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	80.73	1.00	80.73
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	67.21	1.00	67.21
	LABOUR				
0116	Fitter 1st class	Day	3.00	151.50	454.50
0123	Mason 1st class	Day	3.50	151.50	530.25
0114	Beldar	Day	7.00	135.25	946.75
	TOTAL				6,832.99
	Add 1% for water charges				68.33
	TOTAL				6,901.32
	Add 15% for contractor's profit and overheads				1,035.20
	Cost for one no				7,936.52
	Say				7,936.50

17.5 Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :

17.5.4 Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7379	Four half stall urinals of white vitreous china with waste fittings	each	4.00	1,224.00	4,896.00
7361	10 litre PVC automatic flushing cistern with fitting	each	1.00	465.00	465.00
1535	Standard size flush pipe with unions, spreaders and clamps all in C.P. brass	each	1.00	465.00	465.00
1893	80 mm diameter standard urinal C.I. Trap with vent arm outlet grating other couplings in C.P. brass	each	1.00	158.00	158.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	107.64	1.00	107.64
9999	Painting of fittings etc.	L.S.	39.00	1.00	39.00
9999	Carriage of materials	L.S.	80.73	1.00	80.73
	LABOUR				
0116	Fitter 1st class	Day	3.50	151.50	530.25
0123	Mason 1st class	Day	4.00	151.50	606.00
0114	Beldar	Day	8.00	135.25	1,082.00
	TOTAL				8,447.17
	Add 1% for water charges				84.47
	TOTAL				8,531.64
	Add 15% for contractor's profit and overheads				1,279.75
	Cost for one no				9,811.39
	Say				9,811.40

17.6 Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :

17.6.1 Single squatting plate with 5 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1915	Squatting plate of white glazed vitreous china	each	1.00	610.00	610.00
7359	5 litre PVC automatic flushing cistern with fitting	each	1.00	430.00	430.00
1540	G.I. Flush pipe of standard size with spreaders fittings	each	1.00	138.00	138.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	26.91	1.00	26.91
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	LABOUR				
0116	Fitter 1st class	Day	1.75	151.50	265.12
0123	Mason 1st class	Day	0.75	151.50	113.62
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				2,059.86
	Add 1% for water charges				20.60
	TOTAL				2,080.46
	Add 15% for contractor's profit and overheads				312.07
	Cost for one no.				2,392.53
	Say				2,392.55

17.6 Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :

17.6.2 Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1915	Squatting plate of white glazed vitreous china	each	2.00	610.00	1,220.00
7359	5 litre PVC automatic flushing cistern with fitting	each	1.00	430.00	430.00
1541	G.I. Flush pipe of standard size with spreaders fittings	each	1.00	203.00	203.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	53.82	1.00	53.82
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	33.15	1.00	33.15
	LABOUR				
0116	Fitter 1st class	Day	2.50	151.50	378.75
0123	Mason 1st class	Day	1.00	151.50	151.50
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				3,054.77
	Add 1% for water charges				30.55
	TOTAL				3,085.32
	Add 15% for contractor's profit and overheads				462.80
	Cost for one no.				3,548.12
	Say				3,548.10

17.6 Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :

17.6.3 Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1915	Squatting plate of white glazed vitreous china	each	3.00	610.00	1,830.00
7361	10 litre PVC automatic flushing cistern with fitting	each	1.00	465.00	465.00
1542	G.I. Flush pipe of standard size with spreaders fittings	each	1.00	255.00	255.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	80.73	1.00	80.73
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	42.12	1.00	42.12
	LABOUR				
0116	Fitter 1st class	Day	3.00	151.50	454.50
0123	Mason 1st class	Day	1.50	151.50	227.25
0114	Beldar	Day	5.00	135.25	676.25
	TOTAL				4,074.40
	Add 1% for water charges				40.74
	TOTAL				4,115.14
	Add 15% for contractor's profit and overheads				617.27
	Cost for one no.				4,732.41
	Say				4,732.40

17.6 Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :

17.6.4 Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1915	Squatting plate of white glazed vitreous china	each	4.00	610.00	2,440.00
7361	10 litre PVC automatic flushing cistern with fitting	each	1.00	465.00	465.00
1543	G.I. Flush pipe of standard size with spreaders fittings	each	1.00	320.00	320.00
9999	Red lead, white lead and gasket	L.S.	17.55	1.00	17.55
9999	Cement, sand and grit etc.	L.S.	107.64	1.00	107.64
9999	Painting of fittings etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	69.03	1.00	69.03
	LABOUR				
0116	Fitter 1st class	Day	3.50	151.50	530.25
0123	Mason 1st class	Day	1.75	151.50	265.12
0114	Beldar	Day	5.50	135.25	743.88
	TOTAL				4,984.47
	Add 1% for water charges				49.84
	TOTAL				5,034.31
	Add 15% for contractor's profit and overheads				755.15
	Cost for one no.				5,789.46
	Say				5,789.45

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.1 White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1947	630x450 mm flat back wash basin of white vitreous china	each	1.00	585.00	585.00
1885	15 mm C.P. brass piller taps	each	2.00	103.00	206.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.33	151.50	50.00
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.67	135.25	90.62
	TOTAL				1,147.56
	Add 1% for water charges				11.48
	TOTAL				1,159.04
	Add 15% for contractor's profit and overheads				173.86
	Cost for one no				1,332.90
	Say				1,332.90

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.2 White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1947	630x450 mm flat back wash basin of white vitreous china	each	1.00	585.00	585.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				1,034.60
	Add 1 % for water charges				10.35

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				1,044.95
	Add 15% for contractor's profit and overheads				156.74
	Cost for one no.				1,201.69
	Say				1,201.70

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.3 White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3229	550x400 mm flat back wash basin of white vitreous china	each	1.00	450.00	450.00
1885	15 mm C.P. brass piller taps	each	2.00	103.00	206.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.33	151.50	50.00
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.67	135.25	90.62
	TOTAL				1,012.56
	Add 1% for water charges				10.13
	TOTAL				1,022.69
	Add 15% for contractor's profit and overheads				153.40
	Cost for one no.				1,176.09
	Say				1,176.10

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.4 White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3229	550x400 mm flat back wash basin of white vitreous china	each	1.00	450.00	450.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				899.60
	Add 1% for water charges				9.00
	TOTAL				908.60
	Add 15% for contractor's profit and overheads				136.29
	Cost for one no.				1,044.89
	Say				1,044.90

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.5 White Vitreous China Angle back wash basin size 600x480 mm with single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1949	600x480 mm angle back wash basin of white vitreous china	each	1.00	540.00	540.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				989.60
	Add 1% for water charges				9.90
	TOTAL				999.50
	Add 15% for contractor's profit and overheads				149.93
	Cost for one no.				1,149.43
	Say				1,149.45

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.6 White Vitreous China Angle back wash basin size 400x400 mm with single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1950	400x400 mm angle back wash basin of white vitreous china	each	1.00	347.00	347.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				796.60
	Add 1% for water charges				7.97
	TOTAL				804.57
	Add 15% for contractor's profit and overheads				120.69
	Cost for one no.				925.26
	Say				925.25

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.7 White Vitreous China Flat back wash basin size 450x300 mm with single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7004	450x300 mm angle back wash basin of white vitreous china	each	1.00	360.00	360.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				809.60
	Add 1% for water charges				8.10
	TOTAL				817.70
	Add 15% for contractor's profit and overheads				122.66
	Cost for one no				940.36
	Say				940.35

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.8 White Vitreous China Surgeon type wash basin of size 660x460 mm with a pair of L5 mm C.P. brass pillar taps with elbow operated levers.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3213	660x460 mm Surgeon type wash basin of white vitreous china	each	1.00	810.00	810.00
7363	15 mm C.P. brass piller taps (elbow operated lever)	each	2.00	396.00	792.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.33	151.50	50.00
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.67	135.25	90.62
	TOTAL				1,958.56
	Add 1% for water charges				19.59
	TOTAL				1,978.15
	Add 15% for contractor's profit and overheads				296.72
	Cost for one no.				2,274.87
	Say				2,274.85

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.9 White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3213	660x460 mm Surgeon type wash basin of white vitreous china	each	1.00	810.00	810.00
7363	15 mm C.P. brass piller taps (elbow operated lever)	each	1.00	396.00	396.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				1,552.60
	Add 1% for water charges				15.53

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				1,568.13
	Add 15% for contractor's profit and overheads				235.22
	Cost for one no.				1,803.35
	Say				1,803.35

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.10 Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7806	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm X 355mm	each	1.00	1,500.00	1,500.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				1,949.60
	Add 1% for water charges				19.50
	TOTAL				1,969.10
	Add 15% for contractor's profit and overheads				295.36
	Cost for one no.				2,264.46
	Say				2,264.45

17.7 Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :

17.7.11 Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7807	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm X 345mm	each	1.00	1,350.00	1,350.00
1885	15 mm C.P. brass piller taps	each	1.00	103.00	103.00
1951	32 mm diameter C.P. brass waste of standard pattern	each	1.00	48.00	48.00
1309	C.I./M.S. brackets	pair	1.00	48.00	48.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting of brackets, fittings etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0116	Fitter 1st class	Day	0.30	151.50	45.45
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.63	135.25	85.21
	TOTAL				1,799.60
	Add 1% for water charges				18.00
	TOTAL				1,817.60
	Add 15% for contractor's profit and overheads				272.64
	Cost for one no.				2,090.24
	Say				2,090.25

17.8 Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pedestal				
	MATERIALS				
1396	White vitreous china pededstal	each	1.00	527.00	527.00
9999	White cement mortar	L.S.	40.30	1.00	40.30
9999	Carriage of materials and fixing charges	L.S.	40.43	1.00	40.43
	TOTAL				607.73
	Add 1% for water charges				6.08
	TOTAL				613.81
	Add 15% for contractor's profit and overheads				92.07
	Cost for one no.				705.88
	Say				705.90

17.9 Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste complete, including painting the fittings and brackets, cutting and making good the walls wherever required :

17.9.1 White glazed fire clay kitchen sink of size 600x450x250 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1863	White glazed fire clay kitchen sink of size 600x450x250 mm	each	1.00	1,192.00	1,192.00
1309	C.I. Bracket	pair	1.00	48.00	48.00
1315	C.P. brass chain with 40 mm rubber plug	each	1.00	22.00	22.00
1952	40 mm C.P. brass waste	each	1.00	53.00	53.00
9999	Red lead, white lead and gasket	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting brackets etc.	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.56	135.25	75.74
	TOTAL				1,544.01
	Add 1% for water charges				15.44
	TOTAL				1,559.45
	Add 15% for contractor's profit and overheads				233.92
	Cost for one no.				1,793.37
	Say				1,793.35

17.10 Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:

17.10.1 Kitchen sink with drain board

17.10.1.1 510x1040 mm bowl depth 250mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7095	Stainless steel kitchen sink - with drain board bowl depth 250 mm.	each	1.00	4900.00	4,900.00
1309	C.I. Brackets	pair	2.00	48.00	96.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.00	27.04
9999	Painting brackets	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.60	151.50	90.90
0114	Beldar	Day	0.82	135.25	110.90
	TOTAL				5,298.60
	Add 1% for water charges				52.99
	TOTAL				5,351.59
	Add 15% for contractor's profit and overheads				802.74
	Cost for one no				6,154.33
	Say				6,154.35

17.10 Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:

17.10.1 Kitchen sink with drain board

17.10.1.2 510x1040 mm bowl depth 225mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7096	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 225 mm.	each	1.00	4,600.00	4,600.00
1309	C.I. Brackets	pair	2.00	48.00	96.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.00	27.04
9999	Painting brackets	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.60	151.50	90.90
0114	Beldar	Day	0.82	135.25	110.90
	TOTAL				4,998.60
	Add 1% for water charges				49.99
	TOTAL				5,048.59
	Add 15% for contractor's profit and overheads				757.29
	Cost for one no				5,805.88
	Say				5,805.90

17.10 Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :

17.10.1 Kitchen sink with drain board

17.10.1.3 510x1040 mm bowl depth 200mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7097	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 200 mm.	each	1.00	4,100.00	4,100.00
1309	C.I. Brackets	pair	2.00	48.00	96.00
9999	Cement, sand and grit etc.	L.S.	27.04	1.00	27.04
9999	Painting brackets	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.60	151.50	90.90
0114	Beldar	Day	0.82	135.25	110.90
	TOTAL				4,498.60
	Add 1% for water charges				44.99
	TOTAL				4,543.59
	Add 15% for contractor's profit and overheads				681.54
	Cost for one no				5,225.13
	Say				5,225.15

17.10 Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:

17.10.1 Kitchen sink with drain board

17.10.1.4 510x1040 mm bowl depth 178mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7,098	Stainless steel kitchen sink - with drain board 510xl040mm bowl depth 178 mm	each	1.00	2,600.00	2,600.00
1,309	C.I. Brackets	pair	2.00	48.00	96.00
9,999	Cement, sand and grit etc.	L.S.	27.04	1.00	27.04
9,999	Painting brackets	L.S.	26.91	1.00	26.91
9,999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.60	151.50	90.90
0114	Beldar	Day	0.82	135.25	110.90
	TOTAL				2,998.60
	Add 1% for water charges				29.99
	TOTAL				3,028.59
	Add 15% for contractor's profit and overheads				454.29
	Cost for one no				3,482.88
	Say				3,482.90

17.10 Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :

17.10.2 Kitchen sink without drain board

17.10.2.1 610x510 mm bowl depth 200 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7101	Stainless steel kitchen sink - without drain board 610x510mm bowl depth 200 mm	each	1.00	2,700.00	2,700.00
1309	C.I. Brackets	pair	1.00	48.00	48.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Painting brackets	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.56	135.25	75.74
	TOTAL				2,961.02
	Add 1% for water charges				29.61
	TOTAL				2,990.63
	Add 15% for contractor's profit and overheads				448.59
	Cost for one no				3,439.22
	Say				3,439.20

17.10 Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:

17.10.2 Kitchen sink without drain board

17.10.2.2 610x460 mm bowl depth 200 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7102	Stainless steel kitchen sink - without drain board 610x460mm bowl depth 178 mm	each	1.00	2,500.00	2,500.00
1309	C.I. Brackets	pair	1.00	48.00	48.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Painting brackets	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.56	135.25	75.74
	TOTAL				2,761.02
	Add 1% for water charges				27.61
	TOTAL				2,788.63
	Add 15% for contractor's profit and overheads				418.29
	Cost for one no				3,206.92
	Say				3,206.90

17.10 Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :

17.10.2 Kitchen sink without drain board

17.10.2.3 470x420 mm bowl depth 178 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7103	Stainless steel kitchen sink - without drain board 470x420mm bowl depth 178 mm	each	1.00	1,600.00	1,600.00
1309	C.I. Brackets	pair	1.00	48.00	48.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Painting brackets	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.56	135.25	75.74
	TOTAL				1,861.02
	Add 1% for water charges				18.61
	TOTAL				1,879.63
	Add 15% for contractor's profit and overheads				281.94
	Cost for one no				2,161.57
	Say				2,161.55

17.11 Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete including painting of fittings and brackets, cutting and making good the wall wherever required :

17.11.1 Size 450x300x150mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1871	White vitreous china laboratory sink of size 450x300x150 mm	each	1.00	664.00	664.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	48.00	48.00
1315	C.P. brass chain with 40 mm rubber plug	each	1.00	22.00	22.00
1952	C.P. brass waste 40 mm	each	1.00	53.00	53.00
1895	40 mm C.P. brass trap	each	1.00	99.00	99.00
3617	40 mm C.P. brass union	each	1.00	130.00	130.00
9999	Red lead, white lead and gaskit	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Sundries	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.56	135.25	75.74
	TOTAL				1,245.01
	Add 1% for water charges				12.45
	TOTAL				1,257.46
	Add 15% for contractor's profit and overheads				188.62
	Cost for 1 no.				1,446.08
	Say				1,446.10

17.11 Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete including painting of fittings and brackets, cutting and making good the wall wherever required :

17.11.2 Size 600x450x200mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
1872	White vitreous china laboratory sink of size 600x450x200 mm	each	1.00	1,400.00	1,400.00
1309	C.I. bracket for wash basin and sinks	pair	1.00	48.00	48.00
1315	C.P. brass chain with 40 mm rubber plug	each	1.00	22.00	22.00
1952	C.P. brass waste 40 mm	each	1.00	53.00	53.00
1895	40mm C.P. brass trap	each	1.00	99.00	99.00
3617	C.P. brass union, 40mm dia	each	1.00	130.00	130.00
9999	Red lead, white lead and gaskit	L.S.	16.12	1.00	16.12
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Sundries	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.22	151.50	33.33
0123	Mason 1st class	Day	0.33	151.50	50.00
0114	Beldar	Day	0.56	135.25	75.74
	TOTAL				1,981.01
	Add 1% for water charges				19.81
	TOTAL				2,000.82
	Add 15% for contractor's profit and overheads				300.12
	Cost for 1 no				2,300.94
	Say				2,300.95

17.12 Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :

17.12.1 White glazed fire clay draining board of size 600x450x25mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7364	White glazed fire clay draining board of size 600x450x25 mm	each	1.00	390.00	390.00
1309	C.I./M.S. Brackets	pair	1.00	48.00	48.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Painting brackets etc.	L.S.	26.00	1.00	26.00
9999	Carriage of materials	L.S.	7.80	1.00	7.80
	LABOUR				
0116	Fitter 1st class	Day	0.06	151.50	9.09
0123	Mason 1st class	Day	0.17	151.50	25.76
0114	Beldar	Day	0.22	135.25	29.76
	TOTAL				549.80
	Add 1% for water charges				5.50
	TOTAL				555.30
	Add 15% for contractor's profit and overheads				83.30
	Cost for 1 no.				638.60
	Say				638.60

17.13 Providing and fixing white vitreous china water closet squatting pan (Indian type)
17.13.1 Long pattern W.C. pan of size 580 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1953	White glazed vitreous china long pan pattern squatting pan size 580 mm	each	1.00	290.00	290.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				460.28
	Add 1% for water charges				4.60
	TOTAL				464.88
	Add 15% for contractor's profit and overheads				69.73
	Cost for 1 no.				534.61
	Say				534.60

17.13 Providing and fixing white vitreous china water closet squatting pan (Indian type)
17.13.2 Orissa pattern W.C. pan of size 580x440 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1954	White glazed vitreous china Orissa pattern squatting pan size 580 mm	each	1.00	700.00	700.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				870.28
	Add 1% for water charges				8.70
	TOTAL				878.98
	Add 15% for contractor's profit and overheads				131.85
	Cost for 1 no.				1010.83
	Say				1010.85

17.14 Extra for using coloured W.C. pan instead of white W.C. pan
17.14.1 Orissa pattern W.C. pan 580x440 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7104	Coloured Orissa patern W.C. pan	each	1.00	1043.00	1043.00
1954	White Orissa patern W.C. pan 580x440 mm	each	1.00	700.00	-700.00
	Difference of cost				343.00
	Add 1% for water charges				3.43
	TOTAL				346.43
	Add 15% for contractor's profit and overheads				51.96
	Cost for 1 no.				398.39
	Say				398.40

17.15 Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1955	White vitreous china pedestal type W.C. pan	each	1.00	554.00	554.00
9999	Cement, sand and grit etc.	L.S.	13.39	1.00	13.39
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				724.28
	Add 1% for water charges				7.24
	TOTAL				731.52
	Add 15% for contractor's profit and overheads				109.73
	Cost for 1 no.				841.25
	Say				841.25

17.16 Extra for using coloured pedestal type W.C pan (European type) with low level cistern of same colour instead of white vitreous china W.C pan and cistern.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7105	Coloured (European type) W.C. pan	each	1.00	865.00	865.00
1955	White (European type) W.C. pan	each	1.00	554.00	-554.00
7106	Coloured low level cistern	each	1.00	1 268.00	1268.00
7005	White vitreous china low level flushing cistern 10 litre capacity	each	1.00	824.00	-824.00
	Difference of cost				755.00
	Add 1% for water charges				7.55
	TOTAL				762.55
	Add 15% for contractor's profit and overheads				114.38
	Cost for 1 no				876.93
	Say				876.95

17.17 Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:

17.17.1 250x130x30 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pair				
	MATERIALS				
1363	White vitreous china foot rest of standard pattern for squatting pan W.C.	pair	1.00	79.00	79.00
9999	Cement, sand including carriage of materials	L.S.	8.06	1.00	8.06
	LABOUR				
0123	Mason 1st class	Day	0.06	151.50	9.09
	TOTAL				96.15
	Add 1% for water charges				0.96
	TOTAL				97.11
	Add 15% for contractor's profit and overheads				14.57
	Cost for 1 pair				111.68
	Say				111.70

17.17 Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:

17.17.2 250x125x25 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pair				
	MATERIALS				
1970	White glazed vitreous china foot rest of standard pattern for squatting pan W.C.	pair	1.00	80.00	80.00
9999	Cement, sand including carriage of materials	L.S.	8.06	1.00	8.06
	LABOUR				
0123	Mason Istclass	Day	0.06	151.50	9.09
	TOTAL				97.15
	Add 1% for water charges				0.97
	TOTAL				98.12
	Add 15% for contractor's profit and overheads				14.72
	Cost for 1 pair				112.84
	Say				112.85

17.18 Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.

17.18.1 10 litre capacity-White

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7358	Flushing Cistern P.V.C. 10 Its capacity (low level) (White) (with fittings, accessories and flush pipe)	each	1.00	570.00	570.00
9999	Carriage of materials	L.S.	5.2	1.00	5.20
	LABOUR				
	(Considering 1 fitter and 1 beldar can fix 8 cistern in one day)				
0116	Fitter 1st class	Day	0.125	151.50	18.94
0114	Beldar	Day	0.125	135.25	16.91
	TOTAL				611.05
	Add 1% for water charges				6.11
	TOTAL				617.16
	Add 15% for contractor's profit and overheads				92.57
	Cost for 1 cistern				709.73
	Say				709.75

17.18 Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.

17.18.2 10 litre capacity-coloured

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7123	Controlled flush cistern with accessories	each	1.00	632.00	632.00
9999	Carriage of materials	L.S.	7.02	1.00	7.02
	LABOUR				
	(Considering 1 fitter and 1 beldar can fix 8 cistern in one day)				
0116	Fitter 1 st class	Day	0.125	151.50	18.94
0114	Beldar	Day	0.125	135.25	16.91

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				674.87
	Add 1% for water charges				6.75
	TOTAL				681.62
	Add 15% for contractor's profit and overheads				102.24
	Cost for 1 cistern				783.86
	Say				783.85

17.19 Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.

17.19.1 10 litre (full flush) capacity-white

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7126	Controlled flush cistern with accessories	each	1.00	858.00	858.00
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				1,014.89
	Add 1% for water charges				10.15
	TOTAL				1,025.04
	Add 15% for contractor's profit and overheads				153.76
	Cost for 1 cistern				1,178.80
	Say				1,178.80

17.19 Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.

17.19.2 10 litre (full flush) capacity-coloured

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7127	Controlled flush cistern with accessories	each	1.00	1277.00	1,277.00
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	LABOUR				
0116	Fitter 1 st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				1,433.89
	Add 1% for water charges				14.34
	TOTAL				1,448.23
	Add 15% for contractor's profit and overheads				217.23
	Cost for 1 cistern				1,665.46
	Say				1,665.45

17.20 Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :

17.20.1 White solid plastic seat with lid

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1875	White solid plastic seat and lid with C.P. brass hinges and rubber buffers complete	each	1.00	275.00	275.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	TOTAL				288.39
	Add 1% for water charges				2.88
	TOTAL				291.27
	Add 15% for contractor's profit and overheads				43.69
	Cost for 1 no.				334.96
	Say				334.95

17.20 Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :

17.20.2 Black solid plastic seat with lid

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1876	Black solid plastic seat and lid with C.P. brass hinges and rubber buffers complete	each	1.00	250.00	250.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	TOTAL				263.39
	Add 1% for water charges				2.63
	TOTAL				266.02
	Add 15% for contractor's profit and overheads				39.90
	Cost for 1 no.				305.92
	Say				305.90

17.21 Extra for providing coloured other than black solid P.V.C. plastic seat and cover in European type W.C. pan, instead of white plastic seat and cover.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7107	Coloured P.V.C. plastic seat and lid	each	1.00	380.00	380.00
1875	White P.V.C. plastic seat and lid	each	1.00	275.00	-275.00
	Difference of cost				105.00
	Add 1% for water charges				1.05
	TOTAL				106.05
	Add 15% for contractor's profit and overheads				15.91
	Cost for 1 no.				121.96
	Say				121.95

17.22 Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1614	G.I. Inlet connection	each	1.00	50.00	50.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	TOTAL				63.39
	Add 1% for water charges				0.63
	TOTAL				64.02
	Add 15% for contractor's profit and overheads				9.60
	Cost for 1 no				73.62
	Say				73.60

17.23 Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1913	Flat back or wall corner type lipped front urinal basin 430x260x350 mm and 340x410x260 mm respectively of white vitreous china	each	1.00	380.00	380.00
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	LABOUR				
0116	Fitter 1st class	Day	0.38	151.50	57.57
0114	Beldar	Day	0.38	135.25	51.40
	TOTAL				498.46
	Add 1% for water charges				4.98
	TOTAL				503.44
	Add 15% for contractor's profit and overheads				75.52
	Cost for 1 no.				578.96
	Say				578.95

17.24 Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1915	Squatting plate urinal of white vitreous china with integral longitudinal flush pipe	each	1.00	610.00	610.00
9999	Cement, sand and grit etc.	L.S.	10.79	1.00	10.79
9999	Carriage of materials	L.S.	13.39	1.00	13.39
	LABOUR				
0116	Fitter 1st class	Day	0.50	151.50	75.75
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				920.93
	Add 1% for water charges				9.21
	TOTAL				930.14
	Add 15% for contractor's profit and overheads				139.52
	Cost for 1 no.				1,069.66
	Say				1,069.65

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings:

17.25.1 Flat back wash basin of size 630x450mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
1947	White vitreous china flat back wash basin 630x450 mm	each	1.00	585.00	585.00
9999	Fixing charges	L.S.	53.82	1.00	53.82
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	TOTAL				648.31
	Add 1% for water charges				6.48
	TOTAL				654.79

Code	Description	Unit	Quantity	Rate	Amount
	Add 15% for contractor's profit and overheads				98.22
	Cost for 1 no				753.01
	Say				753.00

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :

17.25.2 Flat back wash basin of size 550x400mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3229	White vitreous china flat back wash basin 550x400 mm	each	1.00	450.00	450.00
9999	Fixing charges	L.S.	53.82	1.00	53.82
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	TOTAL				513.31
	Add 1% for water charges				5.13
	TOTAL				518.44
	Add 15% for contractor's profit and overheads				77.77
	Cost for 1 no.				596.21
	Say				596.20

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings:-

17.25.3 Angle back wash basin of size 600x480mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1949	White vitreous china angle flat back wash basin 600x480 mm	each	1.00	540.00	540.00
9999	Fixing charges	L.S.	53.82	1.00	53.82
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	TOTAL				603.31
	Add 1% for water charges				6.03
	TOTAL				609.34
	Add 15% for contractor's profit and overheads				91.40
	Cost for 1 no				700.74
	Say				700.75

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings:

17.25.4 Angle back wash basin of size 400x400mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1950	White vitreous china angle flat back wash basin 400x400 mm	each	1.00	347.00	347.00
9999	Fixing charges	L.S.	53.82	1.00	53.82
9999	Carriage of materials	L.S.	9.49	1.00	9.49

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				410.31
	Add 1% for water charges				4.10
	TOTAL				414.41
	Add 15% for contractor's profit and overheads				62.16
	Cost for 1 no.				476.57
	Say				476.55

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings:

17.25.5 Flat back wash basin of size 450x300mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no,				
	MATERIALS				
7004	White vitreous china flat back wash basin 450x300 mm	each	1.00	360.00	360.00
9999	Fixing charges	L.S.	53.82	1.00	53.82
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	TOTAL				423.31
	Add 1% for water charges				4.23
	TOTAL				427.54
	Add 15% for contractor's profit and overheads				64.13
	Cost for 1 no				491.67
	Sav				491.65

17.25 Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings:

17.25.6 Surgeon type wash basin of size 660x460mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3213	White vitreous china surgeon type back wash basin 660x460 mm	each	1.00	810.00	810.00
9999	Fixing charges	L.S.	53.82	1.00	53.82
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	TOTAL				873.31
	Add 1% for water charges				8.73
	TOTAL				882.04
	Add 15% for contractor's profit and overheads				132.31
	Cost for 1 no.				1,014.35
	Say				1,014.35

17.26 Providing and fixing kitchen sink including making all connections excluding cost of fittings.

17.26.1 White glazed fire clay sink of size 600x450x250mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1863	White glazed fire clay sink of size 600x450x250 mm	each	1.00	1,192.00	1,192.00
9999	Fixing charges	L.S.	40.43	1.00	40.43
9999	Carriage of materials	L.S.	10.79	1.00	10.79
	TOTAL				1,243.22

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				12.43
	TOTAL				1,255.65
	Add 15% for contractor's profit and overheads				188.35
	Cost for 1 no.				1,444.00
	Say				1,444.00

17.27 Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:

17.27.1 Size 450x300x150 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1871	Laboratory sink of size 450x300x150 mm	each	1.00	664.00	664.00
9999	Fixing charges	L.S.	40.43	1.00	40.43
9999	Carriage of materials	L.S.	10.79	1.00	10.79
	TOTAL				715.22
	Add 1% for water charges				7.15
	TOTAL				722.37
	Add 15% for contractor's profit and overheads				108.36
	Cost for 1 no.				830.73
	Say				830.75

17.27 Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:

17.27.2 Size 600x450x200 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1872	Laboratory sink of size 600x450x200 mm	each	1.00	1,400.00	1,400.00
9999	Fixing charges	L.S.	40.43	1.00	40.43
9999	Carriage of materials	L.S.	10.79	1.00	10.79
	TOTAL				1,451.22
	Add 1% for water charges				14.51
	TOTAL				1,465.73
	Add 15% for contractor's profit and overheads				219.86
	Cost for 1 no.				1,685.59
	Say				1,685.60

17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.

17.28.1 Semi rigid pipe

17.28.1.1 32mmdia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7117	Semi rigid P.V.C. waste pipe with waste fittings	each	1.00	16.00	16.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				36.28

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				0.36
	TOTAL				36.64
	Add 15% for contractor's profit and overheads				5.50
	Cost for 1 no.				42.14
	Say				42.15

17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.

17.28.1 Semi rigid pipe

17.28.1.2 40mmdia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7118	Semi rigid P.V.C. waste pipe with waste fittings	each	1.00	21.00	21.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				41.28
	Add 1% for water charges				0.41
	TOTAL				41.69
	Add 15% for contractor's profit and overheads				6.25
	Cost for 1 no.				47.94
	Say				47.95

17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.

17.28.2 Flexible pipe

17.28.2.1 32mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7119	Flexible pipe (coil type) with waste fittings	each	1.00	20.00	20.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				40.28
	Add 1% for water charges				0.40
	TOTAL				40.68
	Add 15% for contractor's profit and overheads				6.10
	Cost for 1 no.				46.78
	Say				46.80

17.28 Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.

17.28.2 Flexible pipe

17.28.2.2 40mmdia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
7120	Flexible pipe (coil type) with waste fittings	each	1.00	22.00	22.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				42.28
	Add 1% for water charges				0.42
	TOTAL				42.70
	Add 15% for contractor's profit and overheads				6.40
	Cost for 1 no				49.10
	Say				49.10

17.29 Providing and fixing 100 mm sand cast Iron grating for gully trap.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
1369	100 mm S.C.I. Grating for gully or Nahani trap	each	1.00	10.00	10.00
9999	Carriage of materials and fixing charges	L.S.	4.16	1.00	4.16
	TOTAL				14.16
	Add 1% for water charges				0.14
	TOTAL				14.30
	Add 15% for contractor's profit and overheads				2.14
	Cost for 1 no				16.44
	Say				16.45

17.30 Providing and fixing in position 25mm diameter mosquito proof coupling of approved municipal design.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	MATERIALS				
1350	Mosquito proof coupling of the approved municipal design	each	1.00	23.00	23.00
9999	Carriage of materials and fixing charges	L.S.	1.82	1.00	1.82
	TOTAL				24.82
	Add 1% for water charges				0.25
	TOTAL				25.07
	Add 15% for contractor's profit and overheads				3.76
	Cost for 1 no				28.83
	Say				28.85

17.31 Providing and fixing 600x450 mm bevelled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one no.				
	MATERIALS				
1392	Mirror of superior make glass	each	1.00	249.00	249.00
7116	600x450 mm 6 mm thick hard board	sqm	0.27	151.00	40.77
	(A) Wooden cleats				
	(Rate same as item no. 9.32 of SH: Wood work)	each	4.00	10.15	40.60

Code	Description	Unit	Quantity	Rate	Amount
0588	25 mm C.P.brass screw, and washers	100 Nos	4.00	83.00	3.32
9999	Carriage of materials	L.S.	4.16	1.00	4.16
9999	Sundries	L.S.	1.43	1.00	1.43
	LABOUR				
0112	Carpenter II class	Day	0.33	141.60	46.73
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				430.64
	Add 1% for water charges on all except 'A'				3.90
	TOTAL				434.54
	Add 15% for contractor's profit and overheads on all except 'A'				59.09
	Cost of one no.				493.63
	Say				493.65

17.32 Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :

17.32.1 Circular shape 450mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7112	Mirror 450 mm dia with plastic moulded frame	each	1.00	370.00	370.00
	Hard board 0.45x0.45 = 0.2025 sqm				
	Add wastage @ 10% = 0.0203 sqm				
7116	= 0.2228 sqm say 0.22sqm	sqm	0.22	151.00	33.22
7048	Raw plug 40 to 50 mm	each	2.00	7.00	14.00
0588	C.P. bras screws and washers	100 Nos	2.00	83.00	1.66
9999	Sundries	L.S.	1.43	1.00	1.43
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter II class	Day	0.33	141.60	46.73
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				515.83
	Add 1% for water charges				5.16
	TOTAL				520.99
	Add 15% for contractor's profit and overheads				78.15
	Cost of one no.				599.14
	Say				599.15

17.32 Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :

17.32.2 Rectangular shape 453x357mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7113	Mirror 453x357 mm dia with plastic moulded frame	each	1.00	245.00	245.00
	Hard board 0.453x0.357 = 0.1617 sqm				

Code	Description	Unit	Quantity	Rate	Amount
	Add wastage @ 10% = 0.0162 sqm				
7116	= 0.1779 sqm say 0.18 sqm	sqm	0.18	151.00	27.18
7048	Raw plug 40 to 50 mm	each	4.00	7.00	28.00
0588	C.P. bras screws 25 mm and washers	100 Nos	4.00	83.00	3.32
9999	Sundries	L.S.	1.43	1.00	1.43
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter II class	Day	0.33	141.60	46.73
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				400.45
	Add 1% for water charges				4.00
	TOTAL				404.45
	Add 15% for contractor's profit and overheads				60.67
	Cost of one no.				465.12
	Say				465.10

17.32 Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :

17.32.3 Oval shape 450x350mm (outer dimensions)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7114	Oval shape mirror 450x350 mm (outer dimensions)	each	1.00	280.00	280.00
	Hard board 0.45x0.35=0.1575 sqm				
	Add wastage @ 10% = 0.0158 sqm				
7116	= 0.1733 sqm say 0.17 sqm	sqm	0.17	151.00	25.67
7048	Raw plug 40 to 50 mm	each	4.00	7.00	28.00
0588	C.P. bras screws 25 mm and washers	100 Nos	4.00	83.00	3.32
9999	Sundries	L.S.	1.43	1.00	1.43
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter II class	Day	0.33	141.60	46.73
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				433.94
	Add 1% for water charges				4.34
	TOTAL				438.28
	Add 15% for contractor's profit and overheads				65.74
	Cost of one no.				504.02
	Say				504.00

17.32 Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :

17.32.4 Rectangular shape 1500x450 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7115	Mirror 1500x450 mm dia with plastic moulded frame	each	1.00	635.00	635.00
	Hard board 1.50x0.45 = 0.675 sqm				
	Add wastage @ 10% = 0.0675 sqm				

Code	Description	Unit	Quantity	Rate	Amount
7116	= 0.7425 sqm say 0.74sqm	sqm	0.74	151.00	111.74
7048	Raw plug 40 to 50 mm	each	6.00	7.00	42.00
0588	C.P. bras screws and washers	100 Nos	6.00	83.00	4.98
9999	Sundries	L.S.	1.43	1.00	1.43
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter II class	Day	0.33	141.60	46.73
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				890.67
	Add 1% for water charges				8.91
	TOTAL				899.58
	Add 15% for contractor's profit and overheads				134.94
	Cost of one no.				1,034.52
	Say				1,034.50

17.33 Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3228	600x120x5 mm glass shelf with anodised aluminium angle frame C.P. brass brackets & guard rail of standard size	each	1.00	95.00	95.00
7048	Raw plugs	each	2.00	7.00	14.00
0586	40 mm C.P. brass screws	100 Nos	4.00	105.00	4.20
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter II class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
	TOTAL				186.57
	Add 1% for water charges				1.87
	TOTAL				188.44
	Add 15% for contractor's profit and overheads				28.27
	Cost of one no.				216.71
	Say				216.70

17.34 Providing and fixing toilet paper holder :

17.34.1 C.P. brass

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one no.				
	MATERIALS				
1889	C.P. brass toilet holder of standard size	each	1.00	70.00	70.00
	(A) Wooden cleats				
	(Rate same as item no. 9.32 of SH: Wood work)	each	2.00	10.15	20.30 (A)
0588	25 mm C.P.brass screw	100 Nos	2.00	83.00	1.66
9999	Carriage of materials	L.S.	4.29	1.00	4.29
	LABOUR				
0112	Carpenter II class	Day	0.12	141.60	16.99
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				129.47

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges on all except 'A'				1.09
	TOTAL				130.56
	Add 15% for contractor's profit and overheads on all except 'A'				16.54
	Cost of one no.				147.10
	Say				147.10

17.34 Providing and fixing toilet paper holder:
17.34.2 Vitreous china

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one no.				
	MATERIALS				
3749	Vitreous china toilet holder of standard size	each	1.00	89.00	89.00
	(A) Wooden cleats				
	(Rate same as item no. 9.32 of SH: Wood work)	each	2.00	10.15	20.30
0588	25 mm C.P.brass screw	100 Nos	6.00	83.00	4.98
9999	Carriage of materials	L.S.	4.29	1.00	4.29
	LABOUR				
0112	Carpenter II class	Day	0.12	141.60	16.99
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				151.79
	Add 1% for water charges on all except 'A'				1.31
	TOTAL				153.10
	Add 15% for contractor's profit and overheads on all except 'A'				19.92
	Cost of one no.				173.02
	Say				173.00

17.35 Providing and fixing soil, waste and vent pipes:
17.35.1 100 mm dia.
17.35.1.1 Sand cast iron S&S pipe as per IS: 1729.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 17.37 m				
	(1.8mx10)-(9x0.07m) = 17.37 m				
	MATERIALS				
1617	100 mm sand cast iron pipe single socket (1.80 m long)	each	10.50	610.00	6 405.00
	including 5% allowance for wastage				
9999	Scaffolding	L.S.	80.73	1.00	80.73
9999	Carriage of materials	L.S.	53.82	1.00	53.82
	LABOUR				
0116	Fitter 1st class	Day	0.42	151.50	63.63
0100	Bandhani	Day	0.21	138.45	29.07
0114	Beldar	Day	0.83	135.25	112.26
	TOTAL				6 744.51
	Add 1% for water charges				67.45
	TOTAL				6 811.96
	Add 15% for contractor's profit and overheads				1 021.79
	Cost for 17.37 m				7 833.75
	Cost per metre				450.99
	Say				451.00

17.35 Providing and fixing soil, waste and vent pipes :
17.35.1 100 mm dia.
17.35.1.2 Centrifugally cast (spun) iron socketed pipe as per IS: 3989.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 16.87 m				
	(1.75mx10)-(9x0.07m) = 16.87 m				
	MATERIALS				
3620	100 mm centrifugally cast (spun) iron S&S pipes (1.750 m long) including 5% allowance for wastage	each	10.50	978.00	10,269.00
9999	Scaffolding	L.S.	80.73	1.00	80.73
9999	Carriage of materials	L.S.	53.82	1.00	53.82
	LABOUR				
0116	Fitter 1st class	Day	0.42	151.50	63.63
0100	Bandhani	Day	0.21	138.45	29.07
0114	Beldar	Day	0.83	135.25	112.26
	TOTAL				10,608.51
	Add 1% for water charges				106.09
	TOTAL				10,714.60
	Add 15% for contractor's profit and overheads				1,607.19
	Cost for 16.87 m				12,321.79
	Cost per metre				730.40
	Say				730.40

17.35 Providing and fixing soil, waste and vent pipes :
17.35.2 75 mm diameter :
17.35.2.1 Sand cast iron S&S pipe as per IS: 1729.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 17.42 m				
	(1.8mx10)-(9x0.065m)= 17.415 m say 17.42m				
	MATERIALS				
1616	75 mm sand cast iron pipe single socket (1.80 m long) including 5% allowance for wastage	each	10.50	537.00	5,638.50
9999	Scaffolding	L.S.	80.73	1.00	80.73
9999	Carriage of materials	L.S.	40.38	1.00	40.38
	LABOUR				
0116	Fitter 1st class	Day	0.35	151.50	53.02
0100	Bandhani	Day	0.17	138.45	23.54
0114	Beldar	Day	0.70	135.25	94.68
	TOTAL				5,930.85
	Add 1% for water charges				59.31
	TOTAL				5,990.16
	Add 15% for contractor's profit and overheads				898.52
	Cost for 17.42 m				6,888.68
	Cost per metre				395.45
	Say				395.45

17.35 Providing and fixing soil, waste and vent pipes :
17.35.2 75 mm diameter:
17.35.2.2 Centrifugally cast (spun) iron socketed pipe as per IS: 3989.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 16.92 m				
	(1.75mx10)-(9x0.065m) = 16.915 m say 16.92 m				
	MATERIALS				
3621	75 mm centrifugally cast (spun) iron S&S pipes (1.750 m long) including 5% allowance for wastage	each	10.50	846.00	8,883.00
9999	Scaffolding	L.S.	80.73	1.00	80.73
9999	Carriage of materials	L.S.	40.38	1.00	40.38
	LABOUR				
0116	Fitter 1st class	Day	0.35	151.50	53.02
0100	Bandhani	Day	0.17	138.45	23.54
0114	Beldar	Day	0.70	135.25	94.68
	TOTAL				9,175.35
	Add 1% for water charges				91.75
	TOTAL				9,267.10
	Add 15% for contractor's profit and overheads				1,390.06
	Cost for 16.92 m				10,657.16
	Cost per metre				629.86
	Say				629.85

17.36 Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2 (1 cement: 2 fine sand) in S.C.I./C.I. Pipes:
17.36.1 75mm dia pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 4 joints				
	MATERIALS				
9999	Cement mortar, spun yam etc.	L.S.	6.89	1.00	6.89
	LABOUR				
0116	Fitter	Day	0.28	151.50	42.42
0114	Beldar	Day	0.28	135.25	37.87
	TOTAL				87.18
	Add 1% for water charges				0.87
	TOTAL				88.05
	Add 15% for contractor's profit and overheads				13.21
	Cost for 4 joints				101.26
	Cost for 1 joint				25.32
	Say				25.30

17.36 Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2 (1 cement: 2 fine sand) in S.C.I./C.I. Pipes:
17.36.2 100 mm dia pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 4 joints				
	MATERIALS				
9999	Cement mortar, spun yam etc.	L.S.	8.06	1.00	8.06
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				102.69
	Add 1% for water charges				1.03
	TOTAL				103.72
	Add 15% for contractor's profit and overheads				15.56
	Cost for 4 joints				119.28
	Cost for 1 joint				29.82
	Say				29.80

17.37 Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x 10cm of 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :

17.37.1 For 100 mm dia. Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 nos.				
	MATERIALS				
1331	M.S. holder bat clamps = 5 nos.	each	5.00	13.00	65.00
9999	Carriage of bat clamps	L.S.	2.47	1.00	2.47
	LABOUR				
0116	Fitter	Day	0.125	151.50	18.94
0124	Mason 2nd class	Day	0.75	141.60	106.20
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S.	7.15	1.00	7.15
	C.C. Block 5x0.10x0x0.10= 0.005 cum				
0295	20 mm nominal size stone aggregate	cum	0.0033	700.00	2.31
0297	10 mm nominal size stone aggregate	cum	0.0011	700.00	0.77
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0044	53.21	0.23
0982	Coarse sand	cum	0.0022	600.00	1.32
2203	Carriage of coarse sand	cum	0.0022	53.21	0.12
0367	Cement	tonne	0.0016	4,500.00	7.20
2209	Carriage of cement	tonne	0.0016	47.29	0.08
0114	Beldar	Day	0.0045	135.25	0.61
0115	Coolies	Day	0.0032	135.25	0.43
0101	Bhishti	Day	0.0014	138.45	0.19
0123	Mason 1 st class	Day	0.0003	151.50	0.05
0124	Mason 2nd class	Day	0.0003	141.60	0.04
0128	Mate	Day	0.0002	138.45	0.03
9999	Hire charges of machine etc.	L.S.	0.26	1.00	0.26
9999	Sundries	L.S.	0.13	1.00	0.13
9999	Sundries	L.S.	0.13	1.00	0.13
	TOTAL				281.28
	Add 1% for water charges				2.81
	TOTAL				284.09
	Add 15% for contractor's profit and overheads				42.61
	Cost of 5.00 bat clamps				326.70
	Cost of 1.00 bat clamp				65.34
	Say				65.35

17.37 Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x 10cm of 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :

17.37.2 For 75 mm dia. Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 nos.				
	MATERIALS				
1332	M.S. holder bat clamps = 5 nos.	each	5.00	11.00	55.00
9999	Carriage of bat clamps	L.S.	2.47	1.00	2.47
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0116	Fitter	Day	0.125	151.50	18.94
0124	Mason 2nd class	Day	0.75	141.60	106.20
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S.	7.15	1.00	7.15
	C.C. Block 5x0.10x0.10x0.10= 0.005 cum				
0295	20 mm nominal size stone aggregate	cum	0.0033	700.00	2.31
0297	10 mm nominal size stone aggregate	cum	0.0011	700.00	0.77
2202	Carriage of stone aggregate below 40 mm nominal size	cum	0.0044	53.21	0.23
0982	Coarse sand	cum	0.0022	600.00	1.32
2203	Carriage of coarse sand	cum	0.0022	53.21	0.12
0367	Cement	tonne	0.0016	4500.00	7.20
2209	Carriage of cement	tonne	0.0016	47.29	0.08
0114	Beldar	Day	0.0045	135.25	0.61
0115	Coolies	Day	0.0032	135.25	0.43
0101	Bhishti	Day	0.0014	138.45	0.19
0123	Mason 1 st class	Day	0.0003	151.50	0.05
0124	Mason 2nd class	Day	0.0003	141.60	0.04
0128	Mate	Day	0.0002	138.45	0.03
9999	Hire charges of machine etc.	L.S.	0.26	1.00	0.26
9999	Sundries	L.S.	0.13	1.00	0.13
9999	Sundries	L.S.	0.13	1.00	0.13
	TOTAL				271.28
	Add 1% for water charges				2.71
	TOTAL				273.99
	Add 15% for contractor's profit and overheads				41.10
	Cost of 5.00 bat clamps				315.09
	Cost of 1.00 bat clamp				63.02
	Say				63.00

17.38 Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.38.1 100 mm

17.38.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1625	100 mm dia sand cast iron bend with access door including cost of bolts and nuts	each	1.00	194.00	194.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				219.52
	Add 1% for water charges				2.20
	TOTAL				221.72
	Add 15% for contractor's profit and overheads				33.26
	Cost for 1 no.				254.98
	Say				255.00

17.38 Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.38.1 100 mm

17.38.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3624	100 mm dia sand cast iron S & S bend with access door including cost of bolts and nuts	each	1.00	225.00	225.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				250.52
	Add 1% for water charges				2.51
	TOTAL				253.03
	Add 15% for contractor's profit and overheads				37.95
	Cost for 1 no.				290.98
	Say				291.00

17.38 Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.38.2 75 mm dia

17.38.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1624	75 mm sand cast iron bend with access door including cost of bolts and nuts	each	1.00	161.00	161.00
1373	Insertion rubber washer 3 mm thick	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				180.79
	Add 1% for water charges				1.81
	TOTAL				182.60
	Add 15% for contractor's profit and overheads				27.39
	Cost for 1 no.				209.99
	Say				210.00

17.38 Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.38.2 75 mm dia

17.38.2.2 Sand cast iron S&S as per IS- 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3625	75 mm dia send cast iron S&S bend with access door including cost of bolts and nuts	each	1.00	179.00	179.00
1373	Insertion rubber washer 3 mm thick	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				198.79
	Add 1% for water charges				1.99
	TOTAL				200.78
	Add 15% for contractor's profit and overheads				30.12
	Cost for 1 no.				230.90
	Say				230.90

17.39 Providing and fixing plain bend of required degree.
17.39.1 100 mm
17.39.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1621	100 mm sand cast iron plain bend	each	1.00	178.00	178.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				191.52
	Add 1% for water charges				1.92
	TOTAL				193.44
	Add 15% for contractor's profit and overheads				29.02
	Cost for 1 no.				222.46
	Say				222.45

17.39 Providing and fixing plain bend of required degree.
17.39.1 100 mm
17.39.1.2 Sand cast iron S&S as per IS : 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3628	100 mm dia sand cast iron S & S plain bend	each	1.00	190.00	190.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				203.52
	Add 1% for water charges				2.04
	TOTAL				205.56
	Add 15% for contractor's profit and overheads				30.83
	Cost for 1 no.				236.39
	Say				236.40

17.39 Providing and fixing plain bend of required degree.
17.39.2 75 mm
17.39.2.1 Sand cast iron S&S as per IS -1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1620	75 mm sand cast iron plain bend	each	1.00	140.00	140.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				150.79
	Add 1% for water charges				1.51
	TOTAL				152.30
	Add 15% for contractor's profit and overheads				22.84
	Cost for 1 no.				175.14
	Say				175.15

17.39 Providing and fixing plain bend of required degree.
17.39.2 75 mm
17.39.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3629	75 mm dia sand cast iron S&S plain bend	each	1.00	143.00	143.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				153.79
	Add 1% for water charges				1.54
	TOTAL				155.33
	Add 15% for contractor's profit and overheads				23.30
	Cost for 1 no.				178.63
	Say				178.65

17.40 Providing and fixing heel rest sanitary bend
17.40.1 100 mm dia
17.40.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1667	100 mm sand cast iron heel rest bend	each	1.00	197.00	197.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				210.52
	Add 1% for water charges				2.11
	TOTAL				212.63
	Add 15% for contractor's profit and overheads				31.89
	Cost for 1 no.				244.52
	Say				244.50

17.40 Providing and fixing heel rest sanitary bend
17.40.1 100 mm dia
17.40.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3634	100 mm dia sand cast iron S & S heel rest sanitary bend	each	1.00	233.00	233.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				246.52
	Add 1% for water charges				2.47
	TOTAL				248.99
	Add 15% for contractor's profit and overheads				37.35
	Cost for 1 no.				286.34
	Say				286.35

17.40 Providing and fixing heel rest sanitary bend
17.40.2 75 mm
17.40.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1666	75 mm sand cast iron heel rest bend	each	1.00	165.00	165.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				175.79
	Add 1% for water charges				1.76
	TOTAL				177.55
	Add 15% for contractor's profit and overheads				26.63
	Cost for 1 no.				204.18
	Say				204.20

17.40 Providing and fixing heel rest sanitary bend
17.40.2 75 mm
17.40.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3635	75 mm dia send cast iron S&S heel rest sanitary bend	each	1.00	204.00	204.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				214.79
	Add 1% for water charges				2.15
	TOTAL				216.94
	Add 15% for contractor's profit and overheads				32.54
	Cost for 1 no.				249.48
	Say				249.50

17.41 Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :
17.41.1 100x100x100x100mm
17.41.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1637	100x100x100x100 mm sand cast iron double equal junction with access door including cost of bolts and nuts	each	1.00	417.00	417.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	TOTAL				442.39
	Add 1% for water charges				4.42
	TOTAL				446.81
	Add 15% for contractor's profit and overheads				67.02
	Cost for 1 junction				513.83
	Say				513.85

17.41 Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :

17.41.1 100x100x100x100mm

17.41.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3654	100x 100x 100x 100 mm sand cast iron S&S double equal junction with access door including cost of bolts and nuts	each	1.00	502.00	502.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	TOTAL				527.39
	Add 1% for water charges				5.27
	TOTAL				532.66
	Add 15% for contractor's profit and overheads				79.90
	Cost for 1 junction				612.56
	Say				612.55

17.41 Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :

17.41.2 75x75x75x75 mm

17.41.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1636	75x75x75x75 mm sand cast iron double equal junction with access door including cost of bolts and nuts	each	1.00	333.00	333.00
1373	Insertion rubber washer 3 mm thick	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				352.79
	Add 1% for water charges				3.53
	TOTAL				356.32
	Add 15% for contractor's profit and overheads				53.45
	Cost for 1 junction				409.77
	Say				409.75

17.41 Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :

17.41.2 75x75x75x75 mm

17.41.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3655	75x75x75x75 mm sand cast iron S&S double equal junction with access door including cost of bolts and nuts	each	1.00	400.00	400.00
1373	Insertion rubber washer 3 mm thick	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				419.79
	Add 1% for water charges				4.20
	TOTAL				423.99
	Add 15% for contractor's profit and overheads				63.60
	Cost for 1 junction				487.59
	Say				487.60

17.42 Providing and fixing double equal plain junction of required degree.
17.42.1 100x100x100x100 mm
17.42.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1634	100x100x100x100 mm sand cast iron double equal plain junction	each	1.00	394.00	394.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				407.52
	Add 1% for water charges				4.08
	TOTAL				411.60
	Add 15% for contractor's profit and overheads				61.74
	Cost for 1 junction				473.34
	Say				473.35

17.42 Providing and fixing double equal plain junction of required degree.
17.42.1 100x100x100x100 mm
17.42.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3650	100x100x100x100 mm. sand cast iron S&S double equal plain junction	each	1.00	467.00	467.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				480.52
	Add 1% for water charges				4.81
	TOTAL				485.33
	Add 15% for contractor's profit and overheads				72.80
	Cost for 1 junction				558.13
	Say				558.15

17.42 Providing and fixing double equal plain junction of required degree.
17.42.2 75x75x75x75 mm
17.42.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1633	75x75x75x75 mm sand cast iron double equal plain junction	each	1.00	296.00	296.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				306.79
	Add 1% for water charges				3.07
	TOTAL				309.86
	Add 15% for contractor's profit and overheads				46.48
	Cost for 1 junction				356.34
	Say				356.35

17.42 Providing and fixing double equal plain junction of required degree.
17.42.2 75x75x75x75 mm
17.42.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3651	75x75x75x75 mm sand cast iron S&S double equal plain junction	each	1.00	373.00	373.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				383.79
	Add 1% for water charges				3.84
	TOTAL				387.63
	Add 15% for contractor's profit and overheads				58.14
	Cost for 1 junction				445.77
	Say				445.75

17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.
17.43.1 100x100x100 mm
17.43.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1631	100x100x100 mm single equal plain junction with access door including cost of bolts and nuts	each	1.00	297.00	297.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				322.52
	Add 1% for water charges				3.23
	TOTAL				325.75
	Add 15% for contractor's profit and overheads				48.86
	Cost for 1 junction				374.61
	Say				374.60

17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.
17.43.1 100x100x100 mm
17.43.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3644	100x100x100 mm sand cast iron S&S single equal plain junction with access door including cost of bolts and nuts	each	1.00	396.00	396.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				421.52
	Add 1% for water charges				4.22
	TOTAL				425.74
	Add 15% for contractor's profit and overheads				63.86
	Cost for 1 junction				489.60
	Say				489.60

17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.43.2 75x75x75 mm

17.43.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1630	75x75x75 mm single equal plain junction with access door including cost of bolts and nuts	each	1.00	224.00	224.00
1373	Insertion rubber washer 3 mm thick	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				243.79
	Add 1% for water charges				2.44
	TOTAL				246.23
	Add 15% for contractor's profit and overheads				36.93
	Cost for 1 junction				283.16
	Say				283.15

17.43 Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.

17.43.2 75x75x75 mm

17.43.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3645	75x75x75 mm sand cast iron S & S single equal plain junction with access door including cost of bolts and nuts	each	1.00	294.00	294.00
1373	Insertion rubber washer 3 mm thick	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				313.79
	Add 1% for water charges				3.14
	TOTAL				316.93
	Add 15% for contractor's profit and overheads				47.54
	Cost for 1 junction				364.47
	Say				364.45

17.44 Providing and fixing single equal plain junction of required degree

17.44.1 100x100x100 mm

17.44.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1628	100x100x100 mm sand cast iron single equal plain junction	each	1.00	265.00	265.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				278.52
	Add 1% for water charges				2.79
	TOTAL				281.31
	Add 15% for contractor's profit and overheads				42.20
	Cost for 1 junction				323.51
	Say				323.50

17.44 Providing and fixing single equal plain junction of required degree
17.44.1 100x100x100 mm
17.44.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3640	100 x 100 x 100 mm sand cast iron S&S single equal plain junction	each	1.00	367.00	367.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				380.52
	Add 1% for water charges				3.81
	TOTAL				384.33
	Add 15% for contractor's profit and overheads				57.65
	Cost for 1 junction				441.98
	Say				442.00

17.44 Providing and fixing single equal plain junction of required degree
17.44.2 75x75x75 mm
17.44.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1627	75x75x75 mm sand cast iron single equal plain junction	each	1.00	205.00	205.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				215.79
	Add 1% for water charges				2.16
	TOTAL				217.95
	Add 15% for contractor's profit and overheads				32.69
	Cost for 1 junction				250.64
	Say				250.65

17.44 Providing and fixing single equal plain junction of required degree:
17.44.2 75x75x75 mm
17.44.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3641	75x75x75 mm sand cast iron S&S single equal plain junction	each	1.00	276.00	276.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				286.79
	Add 1% for water charges				2.87
	TOTAL				289.66
	Add 15% for contractor's profit and overheads				43.45
	Cost for 1 junction				333.11
	Say				333.10

17.45 Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :

17.45.1 100x100x75x75 mm

17.45.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1662	100x100x75x75 mm sand cast iron branch with access door including cost of bolts and nuts	each	1.00	453.00	453.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				478.52
	Add 1% for water charges				4.79
	TOTAL				483.31
	Add 15% for contractor's profit and overheads				72.50
	Cost for 1 junction				555.81
	Say				555.80

17.45 Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :

17.45.1 100x100x75x75 mm

17.45.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3674	100x100x75x75 mm sand cast iron S&S double unequal junction with access door including cost of bolts and nuts	each	1.00	700.00	700.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				725.52
	Add 1% for water charges				7.26
	TOTAL				732.78
	Add 15% for contractor's profit and overheads				109.92
	Cost for 1 junction				842.70
	Say				842.70

17.46 Providing and fixing double unequal plain junction of required degree:

17.46.1 100x100x75x75 mm

17.46.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1659	100X100X75X75 mm junction	each	1.00	423.00	423.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				436.52
	Add 1% for water charges				4.37
	TOTAL				440.89
	Add 15% for contractor's profit and overheads				66.13
	Cost for 1 junction				507.02
	Say				507.00

17.46 Providing and fixing double unequal plain junction of required degree:
17.46.1 100x100x75x75 mm
17.46.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3670	100x100x75x75 mm sand cast iron S&S double unequal plain junction	each	1.00	639.00	639.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				652.52
	Add 1% for water charges				6.53
	TOTAL				659.05
	Add 15% for contractor's profit and overheads				98.86
	Cost for 1 junction				757.91
	Say				757.90

17.47 Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :
17.47.1 100x100x75 mm
17.47.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1656	100x100x75 mm S.C.I, single unequal junction with access door including cost of bolts and nuts	each	1.00	321.00	321.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				346.52
	Add 1% for water charges				3.47
	TOTAL				349.99
	Add 15% for contractor's profit and overheads				52.50
	Cost for 1 junction				402.49
	Say				402.50

17.47 Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :
17.47.1 100x100x75 mm
17.47.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3664	100x100x75 mm sand cast iron S&S single unequal junction with access door including cost of bolts and nuts	each	1.00	523.00	523.00
1374	Insertion rubber washer 3 mm thick	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				548.52
	Add 1% for water charges				5.49
	TOTAL				554.01
	Add 15% for contractor's profit and overheads				83.10
	Cost for 1 junction				637.11
	Say				637.10

17.48 Providing and fixing single unequal plain junction of required degree :
17.48.1 100x100x75 mm
17.48.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1653	100X100X75 mm junction	each	1.00	288.00	288.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				301.52
	Add 1% for water charges				3.02
	TOTAL				304.54
	Add 15% for contractor's profit and overheads				45.68
	Cost for 1 junction				350.22
	Say				350.20

17.48 Providing and fixing single unequal plain junction of required degree
17.48.1 100x100x75 mm
17.48.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3660	100x100x75 mm sand cast iron S&S single unequal plain junction	each	1.00	461.00	461.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				474.52
	Add 1% for water charges				4.75
	TOTAL				479.27
	Add 15% for contractor's profit and overheads				71.89
	Cost for 1 junction				551.16
	Say				551.15

17.49 Providing and fixing double equal plain invert branch of required degree:
17.49.1 100x100x100x100mm
17.49.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1673	100X100X100x100 mm sand cast iron invert branch	each	1.00	422.00	422.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				435.52
	Add 1% for water charges				4.36
	TOTAL				439.88
	Add 15% for contractor's profit and overheads				65.98
	Cost for 1 invert branch				505.86
	Say				505.85

17.49 Providing and fixing double equal plain invert branch of required degree:
17.49.1 100x100x100x100mm
17.49.1.2 Sand cast iron S&S as per IS 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3685	100x 100x 100 x 100 mm send cast iron S&S double equal plain invert branch	each	1.00	414.00	414.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				427.52
	Add 1% for water charges				4.28
	TOTAL				431.80
	Add 15% for contractor's profit and overheads				64.77
	Cost of 1 invert branch				496.57
	Say				496.55

17.49 Providing and fixing double equal plain invert branch of required degree:
17.49.2 75x75x75x75 mm
17.49.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1672	75X75X75x75 mm sand cast iron invert branch	each	1.00	314.00	314.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				324.79
	Add 1% for water charges				3.25
	TOTAL				328.04
	Add 15% for contractor's profit and overheads				49.21
	Cost for one invert branch				377.25
	Say				377.25

17.49 Providing and fixing double equal plain invert branch of required degree:
17.49.2 75x75x75x75 mm
17.49.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3686	75x75x75x75 mm centrifugally cast(spun) iron S&S double equal plain invert branch	each	1.00	334.00	334.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				344.79
	Add 1% for water charges				3.45
	TOTAL				348.24
	Add 15% for contractor's profit and overheads				52.24
	Cost of one invert branch				400.48
	Say				400.50

17.50 Providing and fixing single equal plain invert branch of required degree:
17.50.1 100x100x100 mm
17.50.1.1 Sand cast iron S&S as per iron 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1670	100X100X100 mm sand cast iron invert branch	each	1.00	321.00	321.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				334.52
	Add 1% for water charges				3.35
	TOTAL				337.87
	Add 15% for contractor's profit and overheads				50.68
	Cost for 1 invert branch				388.55
	Say				388.55

17.50 Providing and fixing single equal plain invert branch of required degree:
17.50.1 100x100x100 mm
17.50.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3681	100x100x100 mm sand cast iron S&S single equal plain invert branch	each	1.00	325.00	325.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				338.52
	Add 1% for water charges				3.39
	TOTAL				341.91
	Add 15% for contractor's profit and overheads				51.29
	Cost of 1 invert branch				393.20
	Say				393.20

17.50 Providing and fixing single equal plain invert branch of required degree:
17.50.2 75x75x75 mm
17.50.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1669	75X75X75 mm sand cast-iron invert branch	each	1.00	239.00	239.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				249.79
	Add 1% for water charges				2.50
	TOTAL				252.29
	Add 15% for contractor's profit and overheads				37.84
	Cost for 1 invert branch				290.13
	Say				290.15

17.50 Providing and fixing single equal plain invert branch of required degree:
17.50.2 75x75x75 mm
17.50.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3682	75x75x75 mm sand cast iron S & S single equal plain invert branch	each	1.00	247.00	247.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				257.79
	Add 1% for water charges				2.58
	TOTAL				260.37
	Add 15% for contractor's profit and overheads				39.06
	Cost of 1 invert branch				299.43
	Say				299.45

17.51 Providing and fixing double unequal invert branch of required degree
17.51.1 100x100x75x75 mm
17.51.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1677	100X100X75x75 mm sand cast iron invert branch	each	1.00	458.00	458.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				471.52
	Add 1% for water charges				4.72
	TOTAL				476.24
	Add 15% for contractor's profit and overheads				71.44
	Cost for 1 invert branch				547.68
	Say				547.70

17.51 : Providing and fixing double unequal invert branch of required degree
17.51.1: 100x100x75x75 mm
17.51.1.2 :Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3695	100x100x75x75 mm sand cast iron S&S double unequal plain invert branch	each	1.00	574.00	574.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				587.52
	Add 1% for water charges				5.88
	TOTAL				593.40
	Add 15% for contractor's profit and overheads				89.01
	Cost of 1 invert branch				682.41
	Say				682.40

17.52 : Providing and fixing single unequal plain invert branch of required degree :
17.52.1: 100x100x75 mm
17.52.1.1: Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1674	100X100X75 mm sand cast iron invert branch	each	1.00	382.00	382.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				395.52
	Add 1% for water charges				3.96
	TOTAL				399.48
	Add 15% for contractor's profit and overheads				59.92
	Cost for 1 invert branch				459.40
	Say				459.40

17.52 : Providing and fixing single unequal plain invert branch of required degree :
17.52.1: 100x100x75 mm
17.52.1.2 : Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3690	100x100x75 mm sand cast iron S&S single unequal plain invert branch	each	1.00	422.00	422.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				435.52
	Add 1% for water charges				4.36
	TOTAL				439.88
	Add 15% for contractor's profit and overheads				65.98
	Cost of 1 invert branch				505.86
	Say				505.85

17.53 : Providing and fixing sand cast iron S&S offsets as per IS: 1729
17.53.1: 76 mm offsets
17.53.1.1: With 75 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3746	76 mm sand cast iron S&S offset with 75 mm dia pipe	each	1.00	126.00	126.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				136.79
	Add 1% for water charges				1.37
	TOTAL				138.16
	Add 15% for contractor's profit and overheads				20.72
	Cost of 1 no				158.88
	Say				158.90

17.53 : Providing and fixing sand cast iron S&S offsets as per IS: 1729
17.53.1: 76 mm offsets
17.53.1.2: With 100 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3747	76 mm sand cast iron S&S offset with 100 mm dia pipe	each	1.00	220.00	220.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				230.79
	Add 1% for water charges				2.31
	TOTAL				233.10
	Add 15% for contractor's profit and overheads				34.97
	Cost of 1 no				268.07
	Say				268.05

17.53 : Providing and fixing sand cast iron S&S offsets as per IS: 1729
17.53.2 : 114 mm offsets
17.53.2.1: With 75 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3712	114 mm sand cast iron S&S offset with 75 mm dia pipe	each	1.00	220.00	220.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				233.52
	Add 1% for water charges				2.34
	TOTAL				235.86
	Add 15% for contractor's profit and overheads				35.38
	Cost of 1 no				271.24
	Say				271.25

17.53 : Providing and fixing sand cast iron S&S offsets as per IS: 1729
17.53.2 : 114 mm offsets
17.53.2.2 : With 100 mm dia. Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3713	114 mm sand cast iron S&S offset with 100 mm dia pipe	each	1.00	289.00	289.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				302.52
	Add 1% for water charges				3.03
	TOTAL				305.55
	Add 15% for contractor's profit and overheads				45.83
	Cost of 1 no.				351.38
	Say				351.40

17.53 : Providing and fixing sand cast iron S&S offsets as per IS: 1729
17.53.3 : 152 mm offsets
17.53.3.1: With 75 mm dia. Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3716	152 mm sand cast iron S&S offset with 75 mm dia pipe	each	1.00	275.00	275.00
9999	Carriage of materials and fixing charges	L.S.	17.94	1.00	17.94
	TOTAL				292.94
	Add 1% for water charges				2.93
	TOTAL				295.87
	Add 15% for contractor's profit and overheads				44.38
	Cost of 1 no.				340.25
	Say				340.25

17.53 : Providing and fixing sand cast iron S&S offsets as per IS: 1729
17.53.3 : 152 mm offsets
17.53.3.2 : With 100 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3717	152 mm sand cast iron S&S offset with 100 mm dia pipe	each	1.00	361.00	361.00
9999	Carriage of materials and fixing charges	L.S.	17.94	1.00	17.94
	TOTAL				378.94
	Add 1% for water charges				3.79
	TOTAL				382.73
	Add 15% for contractor's profit and overheads				57.41
	Cost of 1 no.				440.14
	Say				440.15

17.54 : Providing and fixing sand cast iron S&S offsets as per IS: 3989.
17.54.1 : 75 mm offsets
17.54.1.1: With 75 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3699	75 mm sand cast iron S&S offset with 75 mm dia pipe	each	1.00	179.00	179.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				189.79
	Add 1% for water charges				1.90
	TOTAL				191.69
	Add 15% for contractor's profit and overheads				28.75
	Cost of 1 no.				220.44
	Say				220.45

17.54 Providing and fixing sand cast iron S&S offsets as per IS: 3989.
17.54.2 150 mm offsets
17.54.2.1 With 75 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3707	150 mm sandcast iron S&S offset with 75 mm dia pipe	each	1.00	223.00	223.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.00	16.12
	TOTAL				239.12
	Add 1% for water charges				2.39
	TOTAL				241.51
	Add 15% for contractor's profit and overheads				36.23
	Cost of 1 no.				277.74
	Say				277.75

17.54 Providing and fixing sand cast iron S&S offsets as per IS: 3989.
17.54.2 150 mm offsets
17.54.2.2 With 100 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3,708	150 mm sand cast iron S&S offset with 100 mm dia pipe	each	1.00	306.00	306.00
9,999	Carriage of materials and fixing charges	L.S.	16.12	1.00	16.12
	TOTAL				322.12
	Add 1% for water charges				3.22
	TOTAL				325.34
	Add 15% for contractor's profit and overheads				48.80
	Cost of 1 no.				374.14
	Say				374.15

17.55 Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :
17.55.1 100mm
17.55.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1683	100 mm sand cast iron door piece including cost of bolts and nuts	each	1.00	291.00	291.00

Code	Description	Unit	Quantity	Rate	Amount
1374	Insertion rubber washer	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				316.52
	Add 1% for water charges				3.17
	TOTAL				319.69
	Add 15% for contractor's profit and overheads				47.95
	Cost for 1 no.				367.64
	Say				367.65

17.55 Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :

17.55.1 100 mm

17.55.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3728	100 mm sand cast iron S&S door piece including cost of bolts and nuts	each	1.00	230.00	230.00
1374	Insertion rubber washer	each	1.00	12.00	12.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				255.52
	Add 1% for water charges				2.56
	TOTAL				258.08
	Add 15% for contractor's profit and overheads				38.71
	Cost for 1 junction				296.79
	Say				296.80

17.55 Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :

17.55.2 75 mm

17.55.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1682	75 mm sand cast iron door piece including cost of bolts and nuts	each	1.00	211.00	211.00
1373	Insertion rubber washer	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				230.79
	Add 1% for water charges				2.31
	TOTAL				233.10
	Add 15% for contractor's profit and overheads				34.97
	Cost for 1 no.				268.07
	Say				268.05

17.55 Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :

17.55.2 75 mm

17.55.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				

Code	Description	Unit	Quantity	Rate	Amount
3729	75 mm sand cast iron S&S door piece including cost of bolts and nuts	each	1.00	176.00	176.00
1373	Insertion rubber washer	each	1.00	9.00	9.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				195.79
	Add 1% for water charges				1.96
	TOTAL				197.75
	Add 15% for contractor's profit and overheads				29.66
	Cost for 1 junction				227.41
	Say				227.40

17.56 Providing and fixing terminal guard:
17.56.1 100 mm
17.56.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1640	100 mm sand cast iron terminal guard	each	1.00	152.00	152.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				165.52
	Add 1% for water charges				1.66
	TOTAL				167.18
	Add 15% for contractor's profit and overheads				25.08
	Cost for 1 no.				192.26
	Say				192.25

17.56 Providing and fixing terminal guard:
17.56.1 100 mm
17.56.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3733	100 sand cast iron S&S terminal guard	each	1.00	154.00	154.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				167.52
	Add 1% for water charges				1.68
	TOTAL				169.20
	Add 15% for contractor's profit and overheads				25.38
	Cost of 1 no.				194.58
	Say				194.60

17.56 Providing and fixing terminal guard:
17.56.2 75 mm
17.56.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1639	75 mm sand cast iron tepminal guard	each	1.00	109.00	109.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				119.79

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				1.20
	TOTAL				120.99
	Add 15% for contractor's profit and overheads				18.15
	Cost of 1 no.				139.14
	Say				139.15

17.56 Providing and fixing terminal guard:
17.56.2 75 mm
17.56.2.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3734	75 mm sand cast iron S&S terminal guard	each	1.00	142.00	142.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				152.79
	Add 1% for water charges				1.53
	TOTAL				154.32
	Add 15% for contractor's profit and overheads				23.15
	Cost of 1 no.				177.47
	Say				177.45

17.57 Providing and fixing collar:
17.57.1 100 mm
17.57.1.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1686	100 mm sand cast iron collar	each	1.00	110.00	110.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				123.52
	Add 1% for water charges				1.24
	TOTAL				124.76
	Add 15% for contractor's profit and overheads				18.71
	Cost for 1 no.				143.47
	Say				143.45

17.57 Providing and fixing collar:
17.57.1 100 mm
17.57.1.2 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS.				
3738	100 sand cast iron S&S collar	each	1.00	161.00	161.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				174.52
	Add 1% for water charges				1.75
	TOTAL				176.27
	Add 15% for contractor's profit and overheads				26.44
	Cost of 1 no.				202.71
	Say				202.70

17.57 Providing and fixing collar:
17.57.2 75 mm
17.57.2.1 Sand cast iron S&S as per IS - 1729

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1685	75 mm sand cast iron collar	each	1.00	82.00	82.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				92.79
	Add 1% for water charges				0.93
	TOTAL				93.72
	Add 15% for contractor's profit and overheads				14.06
	Cost of 1 no.				107.78
	Say				107.80

17.57 Providing and fixing collar:
17.57.2 75 mm
17.57.2.2 Sand cast iron S&S as per IS- 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
3739	75 mm sand cast iron S&S collar	each	1.00	115.00	115.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				125.79
	Add 1% for water charges				1.26
	TOTAL				127.05
	Add 15% for contractor's profit and overheads				19.06
	Cost of 1 no.				146.11
	Say				146.10

17.58 Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:
17.58.1 100mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one joint				
	MATERIALS				
1397	Pig lead	kilogram	0.98	58.00	56.84
1881	Spun yarn	kilogram	0.11	30.00	3.30
9999	Kerosene oil, fuel and other sundries	L.S.	13.52	1.00	13.52
9999	Carriage of materials	L.S.	1.43	1.00	1.43
	LABOUR				
0116	Fitter	Day	0.06	151.50	9.09
0117	Asstt. Fitter	Day	0.06	141.60	8.50
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				108.91
	Add 1% for water charges				1.09
	TOTAL				110.00
	Add 15% for contractor's profit and overheads				16.50
	Cost of one joint				126.50
	Say				126.50

17.58 Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:

17.58.2 75 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one joint				
	MATERIALS				
1397	Pig lead	kilogram	0.88	58.00	51.04
1881	Spun yarn	kilogram	0.09	30.00	2.70
9999	Kerosene oil, fuel and other sundries	L.S.	10.79	1.00	10.79
9999	Carriage of materials	L.S.	1.43	1.00	1.43
	LABOUR				
0116	Fitter	Day	0.05	151.50	7.58
0117	Asstt. Fitter	Day	0.05	141.60	7.08
0114	Beldar	Day	0.09	135.25	12.17
	TOTAL				92.79
	Add 1% for water charges				0.93
	TOTAL				93.72
	Add 15% for contractor's profit and overheads				14.06
	Cost of one joint				107.78
	Say				107.80

17.58 Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:

17.58.3 50 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one joint				
	MATERIALS				
1397	Pig lead	kilogram	0.77	58.00	44.66
1881	Spun yarn	kilogram	0.06	30.00	1.80
9999	Kerosene oil, fuel and other sundries	L.S.	6.76	1.00	6.76
9999	Carriage of materials	L.S.	1.43	1.00	1.43
	LABOUR				
0116	Fitter	Day	0.04	151.50	6.06
0117	Asstt. Fitter	Day	0.05	141.60	7.08
0114	Beldar	Day	0.05	135.25	6.76
	TOTAL				74.55
	Add 1% for water charges				0.75
	TOTAL				75.30
	Add 15% for contractor's profit and overheads				11.30
	Cost of one joint				86.60
	Say				86.60

17.59 Providing and fixing M.S. stays and clamps for sand cast iron/centrifugally cast (spun) iron pipes of diameter :

17.59.1 100 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1330	M.S. stayes & clamps including bolts and nuts for 100 mm pipe	each	1.00	28.00	28.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				41.52
	Add 1% for water charges				0.42
	TOTAL				41.94
	Add 15% for contractor's profit and overheads				6.29
	Cost of one no.				48.23
	Say				48.25

17.59 Providing and fixing M.S. stays and clamps for sand castiron/centrifugally cast (spun) iron pipes of diameter :

17.59.2 75 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1335	M.S. stayes & clamps including bolts and nuts for 75 mm pipe	each	1.00	25.00	25.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				35.79
	Add 1% for water charges				0.36
	TOTAL				36.15
	Add 15% for contractor's profit and overheads				5.42
	Cost of one no.				41.57
	Say				41.55

17.59 Providing and fixing M.S. stays and clamps for sand cast iron/centrifugally cast (spun) iron pipes of diameter :

17.59.3 50 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1334	M.S. stayes & clamps including bolts and nuts for 50 mm pipe	each	1.00	20.00	20.00
9999	Carriage of materials and fixing charges	L.S.	9.49	1.00	9.49
	TOTAL				29.49
	Add 1% for water charges				0.29
	TOTAL				29.78
	Add 15% for contractor's profit and overheads				4.47
	Cost of one no.				34.25
	Say				34.25

17.60 Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:

17.60.1 100 mm inlet and 100 mm outlet

17.60.1.1 Sand cast iron S&S as per IS: 3989.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7808	Sand cast iron S&S 100 mm inlet and 100 mm outlet	each	1.00	309.00	309.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				468.62
	Add 1% for water charges				4.69
	TOTAL				473.31
	Add 15% for contractor's profit and overheads				71.00
	Cost of one no.				544.31
	Say				544.30

17.60 Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:

17.60.1 100 mm inlet and 100 mm outlet

17.60.1.2 Sand Cast Iron S&S as per IS: 1729.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1897	Sand cast iron trap with 100 mm inlet and 100 mm outlet	each	1.00	221.00	221.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				380.62
	Add 1% for water charges				3.81
	TOTAL				384.43
	Add 15% for contractor's profit and overheads				57.66
	Cost of one no.				442.09
	Say				442.10

17.60 Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:

17.60.2 100 mm inlet and 75 mm outlet

17.60.2.1 Sand cast iron S&S as per IS - 3989

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7809	Sand cast iron S&S 100 mm inlet and 75 mm outlet	each	1.00	334.00	334.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				493.62
	Add 1% for water charges				4.94
	TOTAL				498.56
	Add 15% for contractor's profit and overheads				74.78
	Cost of one no.				573.34
	Say				573.35

17.60 Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :

17.60.2 100 mm inlet and 75 mm outlet

17.60.2.2 Sand Cast Iron S&S as per IS- 1729.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				

Code	Description	Unit	Quantity	Rate	Amount
1898	Sand cast iron trap with 100 mm inlet and 75 mm outlet	each	1.00	164.00	164.00
9999	Cement, sand and grit etc.	L.S.	13.52	1.00	13.52
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				323.62
	Add 1% for water charges				3.24
	TOTAL				326.86
	Add 15% for contractor's profit and overheads				49.03
	Cost of one no.				375.89
	Say				375.90

17.61 Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4(1 cement: 4 coarse sand):

17.61.1 100mmdia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	MATERIALS				
	Cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate)				
	(Rate as per item no. 4.2.5)	cum	0.022	3112.70	68.48 (A)
9999	Plastering in cement mortar 1:4	L.S.	10.40	1.00	10.40
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0123	Mason 1st class	Day	0.14	151.50	21.21
0114	Beldar	Day	0.27	135.25	36.52
	TOTAL				140.77
	Add 1% for water charges on all except 'A'				0.72
	TOTAL				141.49
	Add 15% for contractor's profit and overheads on all except 'A'				10.95
	Cost of one metre				152.44
	Say				152.45

17.61 Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4(1 cement: 4 coarse sand):

17.61.2 75mmdia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	MATERIALS				
	Cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate)				
	(Rate as per item no. 4.2.5)	cum	0.015	3112.70	46.69 (A)
9999	Plastering in cement mortar 1:4	L.S.	7.80	1.00	7.80

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of materials	L.S.	3.51	1.00	3.51
	LABOUR				
0123	Mason 1st class	Day	0.10	151.50	15.15
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				100.20
	Add 1% for water charges on all except 'A'				0.54
	TOTAL				100.74
	Add 15% for contractor's profit and overheads on all except 'A'				8.11
	Cost of one metre				108.85
	Say				108.85

17.61 Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifiigally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement: 4 coarse sand):

17.61.3 50mmdia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	MATERIALS				
	Cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate)				
	(Rate as per item no. *4.2.5*)	cum	0.008	3 112.70	24.90 (A)
9999	Plastering in cement mortar 1:4	L.S.	5.20	1.00	5.20
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	LABOUR				
0123	Mason 1st class	Day	0.07	151.50	10.60
0114	Beldar	Day	0.14	135.25	18.94
	TOTAL				62.37
	Add 1% for water charges on all except 'A'				0.37
	TOTAL				62.74
	Add 15% for contractor's profit and overheads on all except 'A'				5.68
	Cost of one metre				68.42
	Say				68.40

17.62 Painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality) on the outside surface of the cistern flush pipe, other fittings, etc. complete for new work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cistern with fittings				
	MATERIALS				
0828	Anticorrosive bitumastic paint (of approved quality)	litre	0.23	52.00	11.96
4202	Red oxide Zinc chromate yellow primer	litre	0.20	58.00	11.60
0834	Synthetic enamel paint	litre	0.40	120.00	48.00
9999	Carriage of materials	L.S.	1.43	1.00	1.43
9999	Sundries (brush sand paper etc.)	L.S.	6.76	1.00	6.76
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40

Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	0.50	135.25	67.62
	TOTAL				182.77
	Add 1% for water charges				1.83
	TOTAL				184.60
	Add 15% for contractor's profit and overheads				27.69
	Cost of one no.				212.29
	Say				212.30

17.63 Re-painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint on the outside surface of the cistern, flush pipe, other fittings, etc. complete including polishing of wooden seat and lid and cleaning of W.C. pan with acid wherever necessary.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cistern with fittings				
	MATERIALS				
0828	Anticorrosive bitumastic paint (of approved quality)	litre	0.23	52.00	11.96
0834	Synthetic enamel paint	litre	0.20	120.00	24.00
9999	Polishing of wooden seat and cleaning of W.C. pan with acid	L.S.	20.67	1.00	20.67
9999	Sundries and carriage of materials	L.S.	7.15	1.00	7.15
	LABOUR				
0131	Painter	Day	0.20	141.60	28.32
0114	Beldar	Day	0.25	135.25	33.81
	TOTAL				125.91
	Add 1% for water charges				1.26
	TOTAL				127.17
	Add 15% for contractor's profit and overheads				19.08
	Cost of one no.				146.25
	Say				146.25

17.64 Repainting C.I. cistern with synthetic enamel paint of approved colour brand and manufacture on the outside surface of cistern flush pipe, other fittings etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cistern with fittings				
	MATERIALS				
0834	Synthetic enamel paint	litre	0.20	120.00	24.00
9999	Sundries and carriage of materials	L.S.	3.64	1.00	3.64
	LABOUR				
0131	Painter	Day	0.09	141.60	12.74
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				56.61
	Add 1% for water charges				0.57
	TOTAL				57.18
	Add 15% for contractor's profit and overheads				8.58
	Cost of one no.				65.76
	Say				65.75

17.65 Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :

17.65.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	MATERIALS				
	Perimeter = 3.14x 110 mm =345.71				
	Area 10x0.3457 = 3.46 sqm				
	Priming coat				
	(Rate as per item no. 13.50.3 of S.H. finishing)	sqm	3.46	12.65	43.77 (A)
	Painting two coats with paint of any colour such as chocalate, grey or buff etc.				
	(Rate as per item no 13.61.1 of S.H. finishing	sqm	3.46	35.35	122.31(A)
9999	Add for delay	L.S.	17.16	1.00	17.16
	TOTAL				183.24
	Add 1% for water charges on all except 'A'				0.17
	TOTAL				183.41
	Add 15% for contractor's profit and overheads on all except 'A'				2.60
	Cost of 10 metres				186.01
	Cost of 1 metre				18.60
	Say				18.60

17.65 Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :

17.65.2 75 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	MATERIALS				
	Perimeter = 3.14x82 mm =257.71				
	Area 10x0.2577 =2.577 sqm say 2.60 sq. m for outer surface				
	Priming coat				
	(Rate as per item no. 13.50.3 of S.H. finishing)	sqm	2.60	12.65	32.89(A)
	Painting two coats with paint of any colour such as chocalate, grey or buff etc.				
	(Rate as per item no 13.61.1 of S.H. finishing	sqm	2.60	35.35	91.91(A)
9999	Add for delay	L.S.	15.21	1.00	15.21
	TOTAL				140.01
	Add 1% for water charges on all except 'A'				0.15
	TOTAL				140.16
	Add 15% for contractor's profit and overheads on all except 'A'				2.30
	Cost of 10 metres				142.46
	Cost of 1 metre				14.25
	Say				14.25

17.66 Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with paint of any colour such as chocolate, grey or buff etc :

17.66.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	Painting one coat with paint of any colour such as chocolate,grey or buff etc.				
	(Rate as per item no 14.54.1)	sqm	3.46	22.85	79.06 (A)
9999	Add for delay	L.S.	12.22	1.00	12.22
	TOTAL				91.28
	Add 1% for water charges on all except 'A'				0.12
	TOTAL				91.40
	Add 15% for contractor's profit and overheads on all except 'A'				1.85
	Cost of 10 metres				93.25
	Cost of 1 metre				9.33
	Say				9.30

17.66 Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with paint of any colour such as chocolate, grey or buff etc :

17.66.2 75 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	Painting one coat with paint of any colour such as chocolate,grey or buff etc.				
	(Rate as per item no 14.54.1)	sqm	2.577	22.85	58.88 (A)
9999	Add for delay	L.S.	9.49	1.00	9.49
	TOTAL				68.37
	Add 1% for water charges on all except 'A'				0.09
	TOTAL				68.37
	Add 15% for contractor's profit and overheads on all except 'A'				1.44
	Cost of 10 metres				69.90
	Cost of 1 metre				6.99
	Say				7.00

17.67 Repainting bath tub of size 1700x730x430mm with enamel paint.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one tub				
	MATERIALS				
0830	Paint of approved quality	litre	0.90	115.00	103.50
9999	Sundries	L.S.	6.76	1.00	6.76
	LABOUR				
0131	Painter	Day	0.25	141.60	35.40
0115	Coolies	Day	0.25	135.25	33.81
	TOTAL				179.47
	Add 1% for water charges				1.79
	TOTAL				181.26
	Add 15% for contractor's profit and overheads				27.19
	Cost of one no.				208.45
	Say				208.45

17.68 Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat lid with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40mm flush bend 20mm over flow pipe with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :

17.68.1 White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
1875	White plastic seat and lid with C.P. brass hinges and rubber bufers etc.	each	1.00	275.00	275.00
1965	White vitreous china dual prupose closet (anglo India W.C. pan)	each	1.00	796.00	796.00
7006	10 litre white vitreous china low level flushing cistern with fittings and brackets and 40 mm porcelain enamelled flush bend	each	1.00	1,390.00	1,390.00
9999	20 mm G.I. over flow pipe and specials for over flow pipe	L.S.	276.25	1.00	276.25
1350	Mosquito proof coupling of approved municipal design	each	1.00	23.00	23.00
9999	Plugs, screws etc.	L.S.	59.15	1.00	59.15
9999	Red lead, white lead and gaskin etc.	L.S.	71.76	1.00	71.76
9999	Cement,sand and grit	L.S.	118.43	1.00	118.43
9999	Carriage of materials	L.S.	118.43	1.00	118.43
	LABOUR				
0116	Fitter	Day	1.00	151.50	151.50
0123	Mason 1st class	Day	1.00	151.50	151.50
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				3,566.27
	Add 1% for water charges				35.66
	TOTAL				3,601.93
	Add 15% for contractor's profit and overheads				540.29
	Cost of 1 no.				4,142.22
	Say				4,142.20

17.69 Providing and fixing PTMT Waste Coupling for washbasin and sink, of approved quality and colour.

17.69.1 Waste coupling 3.1 mm of 79mm length and 62mm breadth weighing not less than 45gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :				
7491	P.T.M.T. waste coupling 31/32 mm	Each	1.00	45.00	45.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				65.28
	Add 1% for water charges				0.65
	TOTAL				65.93
	Add 15% for contractor's profit and overheads				9.89
	Cost of one no.				75.82
	Say				75.80

17.69 Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.

17.69.2 Waste coupling 38mm of 83mm length and 77mm breadth, weighing not less than 60gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :				
7492	P.T.M.T. waste coupling 38/40 mm	Each	1.00	66.00	66.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				86.28
	Add 1% for water charges				0.86
	TOTAL				87.14
	Add 15% for contractor's profit and overheads				13.07
	Cost of one no.				100.21
	Say				100.20

17.70 Providing and fixing PTMT Bottle Trap for Wash basin and sink.

17.70.1 Bottle trap 31mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7493	P.T.M.T. bottle trap 31/32 mm	Each	1.00	295.00	295.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				315.28
	Add 1% for water charges				3.15
	TOTAL				318.43
	Add 15% for contractor's profit and overheads				47.76
	Cost of one no.				366.19
	Say				366.20

17.70 Providing and fixing PTMT Bottle Trap for Wash basin and sink.

17.70.2 Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 263gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :				
7494	P.T.M.T. bottle trap 38/40 mm	Each	1.00	320.00	320.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				340.28
	Add 1% for water charges				3.40
	TOTAL				343.68
	Add 15% for contractor's profit and overheads				51.55
	Cost of one no.				395.23
	Say				395.25

17.71 Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colours weighing not less than 105 gms

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :				
7503	P.T.M.T. liquid shop container	Each	1.00	135.00	135.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.00	6.76
	TOTAL				141.76
	Add 1% for water charges				1.42
	TOTAL				143.18
	Add 15% for contractor's profit and overheads				21.48
	Cost of one no.				164.66
	Say				164.65

17.72 Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with a minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colours weighing not less than 80 gms

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7504	P.T.M.T. towel ring	Each	1.00	108.00	108.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				128.28
	Add 1% for water charges				1.28
	TOTAL				129.56
	Add 15% for contractor's profit and overheads				19.43
	Cost of one no				148.99
	Say				149.00

17.73 Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.

17.73.1 450mm long towel rail with total length of 495mm, 78mm wide and effective height of 88mm, weighing not less than 170gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :				
7505	P.T.M.T. towel rail 18" (450mm)	Each	1.00	180.00	180.00
	Wooden cleates				
	(Rate as per item no 9.32 of SH : Wood work)	each	2.00	10.15	20.30(A)
0588	25 mm CP. brass screws	100 Nos	6.00	83.00	4.98
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter 2nd class	Day	0.17	141.60	24.07
0114	Beldar	Day	0.17	135.25	22.99
	TOTAL				256.50
	Add 1% for water charges on all except 'A'				2.36
	TOTAL				258.86
	Add 15% for contractor's profit and overheads on all except 'A'				35.78
	Cost of one no.				294.64
	Say				294.65

17.73 Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.

17.73.2 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7506	P.T.M.T. towel rail 24" (600mm)	Each	1.00	210.00	210.00
	Wooden cleats				
	(Rate as per item no 9.32 of SH : Wood work)	each	2.00	10.15	20.30(A)
0588	25 mm CP. brass screws	100 Nos	6.00	83.00	4.98
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter 2nd class	Day	0.17	141.60	24.07
0114	Beldar	Day	0.17	135.25	22.99
	TOTAL				286.50
	Add 1% for water charges on all except 'A'				2.66
	TOTAL				289.16
	Add 15% for contractor's profit and overheads on all except 'A'				40.33
	Cost of one no				329.49
	Say				329.50

17.74 Providing and fixing PTMT shelf 440 mm long, 124 mm widthand 36 mm height of approved quality and colour, weighing not less than 300gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7507	P.T.M.T. shelf	Each	1.00	245.00	245.00
	Wooden cleates				
	(Rate as per item no 9.32 of SH : Wood work)	each	2.00	10.15	20.30(A)
0588	25 mm CP. brass screws	100 Nos	6.00	83.00	4.98
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	LABOUR				
0112	Carpenter 2nd class	Day	0.17	141.60	24.07
0114	Beldar	Day	0.17	135.25	22.99
	TOTAL				321.50
	Add 1% for water charges on all except 'A'				3.01
	TOTAL				324.51
	Add 15% for contractor's profit and overheads on all except 'A'				45.63
	Cost of one no				370.14
	Say				370.15

17.75 Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes, weighing not less than 60gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7508	P.T.M.T. Urinal spreader 15 mm	Each	1.00	120.00	120.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.00	6.76
	TOTAL				126.76
	Add 1% for water charges				1.27
	TOTAL				128.03
	Add 15% for contractor's profit and overheads				19.20
	Cost of one no				147.23
	Say				147.25

17.76 Providing and fixing PTMT urinal cock of approved quality and colour.

17.76.1 15 mm nominal bore, 80mm long. 42 mm high and 30mm wide with BSP female threads weighing not less than 48gms

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 No.				
	Materials:				
7858	P.T.M.T. Urinal cock 15mm dia	each	1.00	90.00	90.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.00	8.06
	TOTAL				98.06
	Add for water charges @ 1 %				0.98
	TOTAL				99.04
	Add 15% for contractor's profit and over head @				14.86
	Cost for 1 No.				113.90
	Say				113.90

17.77 Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5mm flat of specified shape, projecting 75mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30mm x1.6mm galvanised M.S. flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6mm, one bolts on each side of the pipe.

17.77.1 Total bracket length 580mm of approved shape and design (for single 100mm dia pipe).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 nos.				
	MATERIALS				
	M.S. flats 50x5mm 50x0.58= 2.90m				
	@ 1.97 kg/metre = 5.71 kg.				
	M.S. flats 30x1.6mm 5x0.42 = 2.10m.				
	0.38kg/metre = 0.80kg.				
	Total = 6.51kg.				
	Add wastage 5% = 0.33kg.				
	Total = 6.86 kg.				
1007	M.S.flats 6.86kg. = 0.0686 quintal	quintal	0.0686	3100.00	212.66
2205	Carriage of Steel	tonne	0.00686	47.29	0.32
0116	Fitter (grade 1)	Day	0.033	151.50	5.00
0103	Blacksmith 2nd class	Day	0.049	141.60	6.94
0114	Beldar	Day	0.065	135.25	8.79
	Priming coat				
	5x0.58x0.11 =0.32				
	5x0.42x0.063 =0.13				
	0.45sqm	sqm	0.45	16.55	7.45(A)
	Rate as per item no 13.50.1 of SH : Finishing				
9,999	Sundries	L.S.	1.35	1.00	1.35
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 nos.				
	Rate asper item no. 8.8.1.1 of SH :- Marble work	each	20.00	16.40	328.00(B)
	Total				570.51
	Add 1% for water charges except on A and B				2.35
	Total				572.86
	Add 15% contractor profit and overhead's except on A and B				35.61
	Cost for 5 Nos.				608.47
	Cost for 1 nos.				121.69
	Say				121.70

17.77 Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5mm flat of specified shape, projecting 75mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30mm x1.6mm galvanised M.S. flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6mm, one bolts on each side of the pipe.

17.77.2 Total bracket length 810mm of approved shape and design (for two 100mm dia pipes).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 nos.				
	MATERIALS				
	M.S. flats 50x5mm 50x0.81= 4.05m				
	@ 1.97 kg/ metre = 7.98 kg.				
	M.S. flats 30x1.6mm 5x2x0.42 = 4.20m.				
	O.38kg/metre = 1.60kg.				
	Total = 9.58kg.				
	Add wastage 5% = 0.48kg.				
	Total = 10.06 kg.				
1007	M.S.flats 10.06kg. = 0.1006 quintal	quintal	0.1006	3 100.00	311.86
2205	Carriage of Steel	tonne	0.01006	47.29	0.48
	LABOUR:-				
0116	Fitter (grade 1)	Day	0.048	151.50	7.27
0103	Blacksmith 2nd class	Day	0.072	141.60	10.20
0114	Beldar	Day	0.096	135.25	12.98
	Priming coat				
	5x0.81x0.11 =0.45				
	5x2x0.42x0.063 = 0.26				
	0.71sqm				
	Rate as per item no 13.50.1 of SH: Finishing	sqm	0.71	16.55	11.75(A)
9999	Sundries	L.S.	1.98	1.00	1.98
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 nos.				
	Rate asper item no. 8.8.1.1 of SH :- Marble work	each	20.00	16.40	328.00(B)
	Total				684.52
	Add for water charges 1% except on A and B				3.45
	Total				687.97
	Add 15% contractor profit and overhead's except on A and B				52.23
	Cost for 5 Nos.				740.20
	Cost for 1 nos.				148.04
	Say				148.05

17.77 Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5mm flat of specified shape, projecting 75mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30mm xl.6mm galvanised M.S. flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6mm, one bolts on each side of the pipe.

17.77.3 Total bracket length 1040mm of approved shape and design (for three 100mm dia pipes).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 nos.				
	MATERIALS				
	M.S. flats 50x5mm 50x1.04= 5.20m				
	@ 1.97 kg/ metre = 10.24 kg.				
	M.S. flats 30x1.6mm 5x3x0.42 = 6.30m.				
	0.38kg/metre = 2.39kg.				
	Total = 12.63kg.				
	Add wastage 5% = 0.63kg.				
	Total = 13.26 kg.				
1007	M.S.flats 13.26kg. = 0.1326 quintal	quintal	0.1326	3100.00	411.06
2205	Carriage of Steel	tonne	0.01326	47.29	0.63
	LABOUR:-				
0116	Fitter (grade 1)	Day	0.063	151.50	9.54
0103	Blacksmith 2nd class	Day	0.095	141.60	13.45
0114	Beldar	Day	0.126	135.25	17.04
	Priming coat				
	5xl.04x0.ll =0.57				
	5x3x0.42x0.063 = 0.40				
	0.97sqm				
	Rate as per item no 13.50.1 of SH : Finishing	sqm	0.97	16.55	16.05(A)
9,999	Sundries	L.S.	2.60	1.00	2.60
	P/F expansion hold fasteners 6mm threaded dia 5x4 Nos = 20 nos.				
	Rate asper item no. 8.8.1.1 of SH :- Marble work	each	20.00	16.40	328.00(B)
	Total				798.37
	Add 1% for water charges 1 % except on A and B				4.54
	Total				802.91
	Add 15% contractor profit and overhead's except on A and B				68.83
	Cost for 5 Nos.				871.74
	Cost for 1 nos.				174.35
	Say				174.35

SUB HEAD : 18.0

WATER SUPPLY

18.1: Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. This includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall

18.1.1: 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8300	**(A)** PE-AL-PE Composit pipe 1216				
	(16 mm OD) pipe	Metre	10.00	79.00	790.00
	Add 30% for fitting and wastage etc. on (A)				237.00
9999	Cement, sand and grit	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 262.45
	Add 1% for water charges				12.62
	TOTAL				1 275.07
	Add 15 % for contractor's profit and overheads				191.26
	Cost for 10 metre				1 466.33
	Cost for 1 metre				146.63
	Say				146.65

18.1 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing, this includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall

18.1.2 : 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8301	**(A)** PE-AL-PE Composit pipe 1620 (20 mm OD) Pipe	Metre	10.00	97.00	970.00
	Add 30% for fitting and wastage etc. on (A)				291.00
9999	Cement;sand and grit.	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.82	141.60	116.11
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 519.10
	Add 1% for water charges				15.19
	TOTAL				1 534.29
	Add 15% for contractor's profit and overheads				230.14
	Cost for 10 metre				1 764.43
	Cost for 1 metre				176.44
	Say				176.45

18.1 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing, this includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall

18.1.3 : 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8302	**(A)**PE-AL-PE Composit pipe 2025 (25 mm OD) Pipe	Meter	10.00	126.00	1260.00
	Add 30% for fitting and wasteage on (A)				378.00
9999	Cement, Sand and grit	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1918.76
	Add 1 % for water charges				19.19
	TOTAL				1937.95
	Add 15% for contractor's profit and overheads				290.69
	Cost for 10 metre				2228.64
	Cost for 1 metre				222.86
	Say				222.85

18.1 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing, this includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall

18.1.4: 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8303	**(A)** PE-AL-PE Composit pressure pipe	Meter	10.00	172.00	1720.00
	Add 30% for fitting and wasteage on (A)				516.00
9999	Cement, sand and grit	L.S.	4.16	1.00	4.16
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.98	135.25	132.54
	TOTAL				2561.47
	Add 1 % for water charges				25.61
	TOTAL				2587.08
	Add 15% for contractor's profit and overheads				388.06
	Cost for 10 metre				2975.14
	Cost for 1 metre				297.51
	Say				297.50

18.1 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing, this includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall

18.1.5 : 3240 (40 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8304	**(A)** PE-AL-PE Composit pipe 3240 (40 mm OD) Pipe	Metre	10.00	227.00	2 270.00
	Add 30% for fittings and wastage etc on (A)				681.00
9999	Cement, sand and grit	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				3 369.01
	Add 1% for water charges				33.69
	TOTAL				3 402.70
	Add 15% for contractor's profit and overheads				510.40
	Cost for 10 metre				3 913.10
	Cost for 1 metre				391.31
	Say				391.30

18.1: Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing, this includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall

18.1.6 : 4050 (50 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8305	**(A)**4050mm PE-AL-PE Composit pressure pipe	Metre	10.00	304.00	3040.00
	Add 30% for fittings and wastage etc on (A)				912.00
9999	Cement, sand and grit	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				4 370.01
	Add 1% for water charges				43.70
	TOTAL				4413.71
	Add 15% for contractor's profit and overheads				662.06
	Cost for 10 metre				5 075.77
	Cost for 1 metre				507.58
	Say				507.60

18.2 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows , tees, reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.
Concealed work including cutting chases and making good the wall etc.

18.2.1 : 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8300	**(A)**PE-AL-PE Composit pipe 1216 (16 mm OD) Pipe	Metre	10.00	79.00	790.00
	Add 75% for fitting,clamps and wastage etc on (A)				592.50
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1981.72
	Add 1% for water charges on all except (B)				16.15
	TOTAL				1997.87
	Add 15% for contractor's profit and overheads on all except (B)				244.71
	Cost for 10 metre				2242.58
	Cost for 1 metre				224.26
	Say				224.25

18.2 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1 .Q0 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.
Concealed work including cutting chases and making good the wall etc.

18.2.2 : 1620 (20 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8301	**(A)**PE-AL-PE Composit pipe 1620 (20 mm OD) Pipe	Metre	10.00	97.00	970.00
	Add 75% for fittings, claps and wastage etc on (A)				727.50
	Making chases upto 7:5 x 7.5 cm. in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				2 296.72
	Add 1% for water charges on all except (B)				19.30
	TOTAL				2 316.02
	Add 15% for contractor's profit and overheads on all except (B)				292.43
	Cost for 10 metre				2 608.45
	Cost for 1 metre				260.85
	Say				260.85

18.2 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.

Concealed work including cutting chases and making good the wall etc.

18.2.3 : 2025 (25 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8302	**(A)**PE-AL-PE Composit pipe 2025 (25 mm OD) Pipe	Metre	10.00	126.00	1260.00
	Add 75 % for fittings clamps and wastage etc on (A)				945.00
	Makings chases upto 7.5 x 7.5 cm. in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt.Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				2 804.22
	Add 1% for water charges on all except (B)				24.38
	TOTAL				2 828.60
	Add 15% for contractor's profit and overheads on all except (B)				369.32
	Cost for 10 metre				3 197.92
	Cost for 1 metre				319.79
	Say				319.80

18.2 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00. metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.
Concealed work including cutting chases and making good the wall etc.

18.2.4: 2532 (32 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8303	**(A)** PE-AL-PE Composit pipe 2532 (32 mm OD) Pipe	Metre	10.00	172.00	1 720.00
	Add 75% for fittings, clamps and wastage etc on (A)				1290.00
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
(B)	Rate as per item no 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				3 609.22
	Add 1% for water charges on all except (B)				32.43
	TOTAL				3 641.65
	Add 15% for contractor's profit and overheads on all except (B)				491.27
	Cost for 10 metre				4 132.92
	Cost for 1 metre				413.29
	Say				413.30

18.3 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work

18.3.1 : 1216 (16 mm OD) pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8300	**(A)** PE-AL-PE Composit pipe 1216 (16 mm OD) Pipe	Metre	10.00	79.00	790.00
	Add 30% for fittings and wastage etc on (A)				237.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 239.28
	Add 1 % for water charges				12.39
	TOTAL				1 251.67
	Add 15% for contractor's profit and overheads				187.75
	Cost for 10 metre				1 439.42
	Cost for 1 metre				143.94
	Say				143.95

18.3 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 °C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work

External work

18.3.2 1620 (20 mm OD) pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8301	**(A)**PE-AL-PE Composit pipe 1620 (20 mm OD) Pipe	Metre	10.00	97.00	970.00
	Add 30% for fitting and wastage etc on (A)				291.00
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 473.28
	Add 1% for water charges				14.73
	TOTAL				1 488.01
	Add 15% for contractor's profit and overheads				223.20
	Cost for 10 metre				1 711.21
	Cost for 1 metre				171.12
	Say				171.10

18.3. Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge.

External work

18.3.3. 2025 (25 mm OD) pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details cost for 10 metre				
	MATERIALS				
8302	**(A)**2025mm PE-AL-PE Composit pipe 2025 (25 mm OD) Pipe	Metre	10.00	126.00	1260.00
	Add 30% for fittings and wastage etc on (A)				378.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
114	Beldar	Day	0.66	135.25	89.26
115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 850.28
	Add 1 % for water charges				18.50
	TOTAL				1 868.78
	Add 15% for contractor's profit and overheads				280.32
	Cost for 10 metre				2 149.10
	Cost for 1 metre				214.91
	Say				214.90

18.3 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work

18.3.4 : 2532 (32 mm OD) pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8303	**(A)** 2532 mm PE-AL-PE Composit pressure pipe	Metre	10.00	172.00	1720.00
	Add 30% for fittings and wastage etc. on (A)				516.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				2 448.28
	Add 1 % for water charges				24.48
	TOTAL				2 472.76
	Add 15% for contractor's profit and overheads				370.91
	Cost for 10 metre				2 843.67
	Cost for 1 metre				284.37
	Say				284.35

18.3 Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees. reducers, couplers & connectors etc. with trenching^refilling and testing of joints complete as per direction of the engineer in charge. External work

18.3.5: 3240 (40 mm OD) pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8304	**(A)** PE-AL-PE Composit pipe 3240 (40 mm OD) Pipe	Metre	10.00	227.00	2 270.00
	Add 30% for fittings and wastage etc on(A)				681.00
	LABOUR				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				3 198.39
	Add 1 % for water charges				31.98
	TOTAL				3 230.37
	Add 15% for contractor's profit and overheads				484.56
	Cost for 10 metre				3 714.93
	Cost for 1 metre				371.49
	Say				371.50

18.3 : Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work

External work

18.3.6: 4050 (50 mm OD) pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8305	**(A)** 4050mm PE-Al-PE Composit pressure pipe	Metre	10.00	304.00	3040.00
	Add 30% for fittings and wastage etc on (A)				912.00
	LABOUR				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				4 199.39
	Add 1 % for water charges				41.99
	TOTAL				4 241.38
	Add 15% for contractor's profit and overheads				636.21
	Cost for 10 metre				4 877.59
	Cost for 1 metre				487.76
	Say				487.75

18.4 Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. (Internal work-exposed on wall)

18.4.1 PN-16 Pipe, 16 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metrg				
	MATERIALS				
8625	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 16mm outer dia	metre	10.00	29.00	290.00
	Add 30% for fittings and wastage etc on (A)				87.00
9999	Cement, sand and grit	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				612.45
	Add 1% for water charges				6.12
	TOTAL				618.57
	Add 15% for contractor's profit and overheads				92.79
	Cost for 10 metre				711.36
	Cost for 1 metre				71.14
	Say				71.15

18.4 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. (Internal work - exposed on wall)

18.4.2 : PN-16 Pipe, 20 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8626	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 20 mm outer dia	metre	10.00	44.00	440.00
	Add 30% for fittingsand wastage etc on (A)				132.00
9999	Cement, sand and grit	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.82	141.60	116.11
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				830.10
	Add 1% for water charges				8.30
	TOTAL				838.40
	Add 15% for contractor's profit and overheads				125.76
	Cost for 10 metre				964.16
	Cost for 1 metre				96.42
	Say				96.40

18.4 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. (Internal work - exposed on wall)

18.4.3 : PN - 16 Pipe, 25 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8627	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 25 mm outer dia.	metre	10.00	68.00	680.00
	Add 30% for fitting and wastage etc on (A)				204.00
9999	Cement, sand and grit	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 164.76
	Add 1 % for water charges				11.65
	TOTAL				1 176.41
	Add 15% for contractor's profit and overheads				176.46
	Cost for 10 metre				1 352.87
	Cost for 1 metre				135.29
	Say				135.30

18.4 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clampsat 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. (Internal work - exposed on wall)

18.4.4 : PN-16 Pipe, 32 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8628	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 32 mm outer dia.	metre	10.00	111.00	1110.00
	Add 30% for fitting and wastage etc on (A)				333.00
9999	Cement, sand and grit	L.S.	4.16	1.00	4.16
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.98	135.25	132.54
	TOTAL				1 768.47
	Add 1 % for water charges				17.68
	TOTAL				1 786.15
	Add 15% for contractor's profit and overheads				267.92
	Cost for 10 metre				2 054.07
	Cost for 1 metre				205.41
	Say				205.40

18.4 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. (Internal work - exposed on wall)

18.4.5 : PN-16 Pipe, 40 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8629	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 40 mm outer dia	metre	10	176.00	1760.00
	Add 30% fittings wastage etc on (A)				528.00
9999	Cement sand and grit	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				2 706.01
	Add 1% for water charges				27.06
	TOTAL				2 733.07
	Add 15% for contractor's profit and overheads				409.96
	Cost for 10 metre				3 143.03
	Cost for 1 metre				314.30
	Say				314.30

18.4 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. (Internal work - exposed on wall)

18.4.6 : PN- 16 Pipe, 50 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8630	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 50 mm outer dia	metre	10	257.00	2 570.00
	Add 30% for fittings and wastage etc on (A)				771.00
9999	Cement, sandand grit	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				3 759.01
	Add 1 % for water charges				37.59
	TOTAL				3 796.60
	Add 15% for contractor's profit and overheads				569.49
	Cost for 10 metre				4 366.09
	Cost for 1 metre				436.61
	Say				436.60

18.5 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Chajge. (Concealed work including cutting chases and making good the walls etc.,)

18.5.1 PN- 16 Pipe, 16 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8625	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 16 mm outer dia	metre	10.00	29.00	440.00
	Add 75% for fitting clamps and wastage etc on (A)				217.50
	Making chases upto 7.5 x 7.5 cm. in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1106.72
	Add 1% for water charges on all except (B)				7.40
	TOTAL				1114.12
	Add 15% for contractor's profit and overheads on all except (B)				112.14
	Cost for 10 metre				1226.26
	Cost for 1 metre				122.63
	Say				122.65

18.5 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.5.2: PN-16 Pipe, 20 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8626	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 20 mm outer dia	metre	10.00	44.00	440.00
	Add 75% for fitting, clamps and wastage etc on (A)				330.00
	Making chase upto 7.5 x 7.5 cm. in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1369.22
	Add 1% for water charges on all except (B)				10.03
	TOTAL				1379.25
	Add 15% for contractor's profit and overheads on all except (B)				151.91
	Cost for 10 metre				1531.16
	Cost for 1 metre				153.12
	Say				153.10

18.5 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.5.3 : PN-16 Pipe, 25 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8627	**(A)** 3 layer PP-R pipe (PN-16/SPR 7.4) 25 mm quter dia	metre	10.00	68.00	680.00
	Add 75 % for fittings clamps and wastage etc on(A)				510.00
	Making chases upto 7.5 x 7.5 cm! in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1789.22
	Add 1% for water charges on all except (B)				14.23
	TOTAL				1803.45
	Add 15% for contractor's profit and overheads on all except (B)				215.54
	Cost for 10 metre				2018.99
	Cost for 1 metre				201.90
	Say				201.90

18.5 Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.5.4 : PN-16 Pipe, 32 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8628	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 32 mm outer dia	metre	10.00	111.00	1 110.00
	Add 75% for fittings clamps and wastage etc				832.50
	Making haseiupto 7.5 x 7.5 cm. in walls and add 75% for fittings, clamps and wastage etc. making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
OH4	Beldar	Day	0.66	135.25	89.26
	TOTAL				2 541.72
	Add 1 % for water charges on all except (B)				21.75
	TOTAL				2 563.47
	Add 15% for contractor's profit and overheads on all except (B)				329.55
	Cost for 10 metre				2 893.02
	Cost for 1 metre				289.30
	Say				289.30

18.6 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching .refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.1 : PN-16 Pipe, 16 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8625	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 16 mm outer dia	metre	10.00	29.00	290.00
	Add 30% for fittings and wastage etc on (A)				87.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				589.28
	Add 1% for water charges				5.89
	TOTAL				595.17
	Add 15% for contractor's profit and overheads				89.28
	Cost for 10 metre				684.45
	Cost for 1 metre				68.45
	Say				68.45

18.6 Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.2 : PN-16 Pipe, 20 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8626	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 20 mm outer dia	metre	10.00	44.00	440.00
	Add 30 % for fittings and wastage etc on (A)				132.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				784.28
	Add 1 % for water charges				7.84
	TOTAL				792.12
	Add 15% for contractor's profit and overheads				118.82
	Cost for 10 metre				910.94
	Cost for 1 metre				91.09
	Say				91.10

18.6 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.3: PN - 16 Pipe, 25 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8627	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 25 mm outer dia	metre	10.00	68.00	680.00
	Add 30% for fitting and wastage etc on (A)				204.00
	LABOUR				
0116	Fitter	Day	0.12	151.50	18.18
0114	Beldar	Day	0.25	135.25	33.81
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 114.51
	Add 1% for water charges				11.15
	TOTAL				1 125.66
	Add 15% for contractor's profit and overheads				168.85
	Cost for 10 metre				1 294.51
	Cost for 1 metre				129.45
	Say				129.45

18.6: Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.4 : PN-16 Pipe, 32 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8628	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 32 mm	metre	10.00	111.00	1 110.00
	Add 30% for fitting and wastage etc on (A)				333.00
	LABOUR				
0116	Fitter	Day	0.12	151.50	18.18
0114	Beldar	Day	0.25	135.25	33.81
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 673.51
	Add 1% for water charges				16.74
	TOTAL				1 690.25
	Add 15% for contractor's profit and overheads				253.54
	Cost for 10 metre				1 943.79
	Cost for 1 metre				194.38
	Say				194.40

18.6 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.5 : PN-16 Pipe, 40 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8629	**(A)** 3 1ayer PP-R pipe(PN-16/SDR7.4) 40mm outer dia	metre	10.00	176.00	1 760.00
	Add 30% for fitting and wastage etc on (A)				528.00
	LABOUR				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				2 535.39
	Add 1% for water charges				25.35
	TOTAL				2 560.74
	Add 15% for contractor's profit and overheads				384.11
	Cost for 10 metre				2 944.85
	Cost for 1 metre				294.49
	Say				294.50

18.6 Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching Refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.6 : PN - 16 Pipe, 50 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8630	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 50 mm quter dia	metre	10.00	257.00	2 570.00
	Add 30% for fitting and wastage etc on (A)				771.00
	LABOUR				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				3 588.39
	Add 1 % for water charges				35.88
	TOTAL				3 624.27
	Add 15% for contractor's profit and overheads				543.64
	Cost for 10 metre				4 167.91
	Cost for 1 metre				416.79
	Say				416.80

18.6: Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.7: PN - 16 Pipe, 63mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8631	**(A)** 3 layer PP-R pipe (PN-16/SPR 7.4) 63 mm outer dia	metre	10.00	400.00	4 000.00
	Add 30% for fitting and wastage etc on (A)				1200.00
	LABOUR				
0116	Fitter	Day	0.25	151.50	37.88
0114	Beldar	Day	0.66	135.25	89.26
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				5 505.66
	Add 1% for water charges				55.06
	TOTAL				5560.72
	Add 15% for contractor's profit and overheads				834.11
	Cost for 10 metre				6 394.83
	Cost for 1 metre				639.48
	Say				639.50

18.6 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.8 : PN - 16 Pipe, 75 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8632	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 75 mm outer dia	Metre	10.00	575.00	5750.00
	Add 30% for fitting and wastage etc on (A)				1725.00
	LABOUR				
0116	Fitter	Day	0.25	151.50	37.88
0114	Beldar	Day	0.66	135.25	89.26
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				7 780.66
	Add 1% for water charges				77.81
	TOTAL				7 858.47
	Add 15 % for contractor's profit and overheads				1 178.77
	Cost for 10 metre				9 037.24
	Cost for 1 metre				903.72
	Say				903.70

18.6 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.9 : PN - 16 Pipe, 90 mm OD

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8633	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4) 90 mm outer dia	metre	10.00	917.00	9170.00
	Add 30% for fitting and wastage etc on (A)				2751.00
	LABOUR				
0116	Fitter	Day	0.37	151.50	56.06
0114	Beldar	Day	0.97	135.25	131.19
	Trenching and refilling etc.				
0114	Beldar	Day	0.80	135.25	108.20
0115	Coolie	Day	0.80	135.25	108.20
	TOTAL				12 324.65
	Add 1% for water charges				123.25
	TOTAL				12 447.90
	Add 15% for contractor's profit and overheads				1 867.18
	Cost for 10 metre				14 315.08
	Cost for 1 metre				1 431.51
	Say				1431.50

18.6 : Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.10: PN - 10 Pipe, 110 mm OD (SDR - 11)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8634	**(A)** 3 layer PP-R pipe (PN-16/SDR 7.4)110 mm outer dia	metre	10.00	962.00	9 620.00
	Add 30% for fitting and wastage etc on (A)				2886.00
	LABOUR				
0116	Fitter	Day	0.37	151.50	56.06
0114	Beldar	Day	0.97	135.25	131.19
	Trenching and refilling etc.				
0114	Beldar	Day	0.80	135.25	108.20
0115	Coolie	Day	0.80	135.25	108.20
	TOTAL				12 909.65
	Add 1% for water charges				129.10
	TOTAL				13 038.75
	Add 15% for contractor's profit and overheads				1955.81
	Cost for 10 metre				14 994.56
	Cost for 1 metre				1 499.46
	Say				1 499.45

18.6 Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti -microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work)

18.6.11 PN-10 Pipe, 160 mm OD (SDR- 11)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8635	**(A)** 3 layer PP-R pipe (PN-16/SDR7.4) 160 mm outer dia	metre	10.00	2 028.00	20 280.00
	Add 30% for fitting and wastage etc on (A)				6084.00
	LABOUR				
0116	Fitter	Day	0.58	151.50	87.87
0114	Beldar	Day	1.54	135.25	208.28
	Trenching and refilling etc.				
0114	Beldar	Day	1.20	135.25	162.30
0115	Coolie	Day	1.20	135.25	162.30
	TOTAL				26 984.75
	Add 1 % for water charges				269.85
	TOTAL				27 254.60
	Add 15% for contractor's profit and overheads				4 088.19
	Cost for 10 metre				31 342.79
	Cost for 1 metre				3 134.28
	Say				3 134.30

18.7 : Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. (Internal work Exposed on wall)

18.7.1: 15 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8636	**(A)** 15 mm outer dia CPVCpipe	metre	10.00	45.00	450.00
	Add 30% for fitting and wastage etc on (A)				135.00
9999	Cement, sand and grit etc.	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0 117	Asstt. Fitter	Day	0.82	141.60	116.11
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				843.10
	Add 1% for water charges				8.43
	TOTAL				851.53
	Add 15% for contractor's profit and overheads				127.73
	Cost for 10 metre				979.26
	Cost for 1 metre				97.93
	Say				97.95

18.7 Providing and fixing Chlorinated Poly vinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. (Internal work Exposed on wall)

18.7.2 20 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8637	**(A)** 20 mm outer dia CPVC pipe ,	metre	10.00	55.00	550.00
	Add 30% for fitting and wastage etc on (A)				165.00
9999	Cement, sand and grit etc.	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				995.76
	Add 1% for water charges				9.96
	TOTAL				1 005.72
	Add 15% for contractor's profit and overheads				150.86
	Cost for 10 metre				1 156.58
	Cost for 1 metre				115.66
	Say				115.65

18.7: Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge, (Internal work- Exposed on wall)

18.7.3 : 25 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8638	**(A)** 25mm outer dia CPVC pipe	metre	10.00	78.00	780.00
	Add 30% for fitting and wastage etc on (A)				234.00
9999	Cement, sand & grit etc.	L.S	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 294.76
	Add 1% for water charges				12.95
	TOTAL				1 307.71
	Add 15% for contractor's profit and overheads				196.16
	Cost for 10 metre				1 503.87
	Cost for 1 metre				150.39
	Say				150.40

18.7 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. (Internal work Exposed on wall)

18.7.4 32 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8639	**(A)** 32mm outer dia CPVC pipe	metre	10.00	105.00	1 050.00
	Add 30% for fitting and wastage etc on (A)				315.00
9999	Cement, sanaand gritetcai	L.S.	4.16	1.00	4.16
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.98	135.25	132.54
	TOTAL				1 690.47
	Add 1 % for water charges				16.90
	TOTAL				1 707.37
	Add 15% for contractor's profit and overheads				256.11
	Cost for 10 metre				1 963.48
	Cost for 1 metre				196.35
	Say				196.35

18.7 : Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. (Internal work Exposed on wall)

18.7.5: 40 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8640	**(A)** 40 mm outer dia CPVC Pipe	metre	10.00	150.00	1500.00
	Add 30% for fitting and wastage etc on (A)				450.00
9999	Cement, sand & grit	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				2 368.01
	Add 1 % for water charges				23.68
	TOTAL				2 391.69
	Add15% for contractor's profit and overheads				358.75
	Cost for 10 metre				2 750.44
	Cost for 1 metre				275.04
	Say				275.05

18.7 : Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. (Internal work Exposed on wall)

18.7.6: 50 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8641	**(A)** 50mm outer dia CPVC pipe	metre	10.00	245.00	2450.00
	Add 30% for fitting and wastage etc on (A)				735.00
9999	Cement sand and grit etc	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0 117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				3 603.01
	Add 1% for water charges				36.03
	TOTAL				3 639.04
	Add 15% for contractor's profit and overheads				545.86
	Cost for 10 metre				4 184.90
	Cost for 1 metre				418.49
	Say				418.50

18.8 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.8.1: 15 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8636	**(A)** 15 mmouter dia CPVC Pipe	metre	10.00	45.00	450.00
	Add 75% for fitting and wastage etc on (A)				337.50
	Making chases upto 7.5x7.5 cm.in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 386.72
	Add 1% for water charges on all except (B)				10.20
	TOTAL				1 396.92
	Add 15% for contractor's profit and overheads on all except (B)				154.56
	Cost for 10 metre				1 551.48
	Cost for 1 metre				155.15
	Say				155.15

18.8 : Providing and fixing Chlorinated Poly vinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.8.2 : 20 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8637	**(A)** 20 mm outerdia CPVC pipe	metre	10.00	55.00	550.00
	Add 75% for fitting and wastage etc on (A)				412.50
	Making chases upto 7.5x7.5 cm in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 561.72

Code	Description	Unit	Quantity	Rate	Amount
	Add 1 % for water charges on all except (B)				11.95
	TOTAL				1 573.67
	Add 15% for contractor's profit and overheads on all except (B)				181.08
	Cost for 10 metre				1 754.75
	Cost for 1 metre				175.48
	Say				175.50

18.8 : Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.8.3 : 25 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8638	**(A)** 25 mm outerdia CPVC	metre	10.00	78.00	780.00
	Add 75% for fitting and wastage etc on (A)				585.00
	Making chases upto 7.5x7.5 cm in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 964.22
	Add 1 % for water charges on all except (B)				15.98
	TOTAL				1 980.20
	Add 15% for contractor's profit and overheads on all except (B)				242.06
	Cost for 10 metre				2 222.26
	Cost for 1 metre				222.23
	Say				222.25

18.8 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Concealed work including cutting chases and making good the walls etc.,)

18.8.4 32 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8639	**(A)** 32 mm outer dia CPVC pipe	metre	10.00	105.00	1 050.00
	Add 75% for fillings clamps, wastage etc. on (A)				787.50
	Making chases upto 7.5×7.5 cm in walls and making good the same				
(B)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				2 436.72
	Add 1% for water charges on all except (B)				20.70
	TOTAL				2 457.42
	Add 15% for contractor's profit and overheads on all except (B)				313.64
	Cost for 10 metre				2 771.06
	Cost for 1 metre				277.11
	Say				277.10

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.1 15 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8636	**(A)** 15 mm outer dia CPVC pipe	metre	10.00	45.00	450.00
	Add 30% for fillings and wastage etc. on (A)				135.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
0114	Belder	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				797.28
	Add 1% for water charges				7.97
	TOTAL				805.25
	Add 15% for contractor's profit and overheads				120.79
	Cost for 10 metre				926.04
	Cost for 1 metre				92.60
	Say				92.60

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement , trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.2 20 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8637	**(A)** 20 mm outer dia CPVC pipe	metre	10.00	55.00	550.00
	Add 30% for fillings and wastage etc. on (A)				165.00
	LABOUR				
0116	Fitter	Day	0.08	151.50	12.12
0114	Belder	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				927.28
	Add 1% for water charges				9.97
	TOTAL				936.55
	Add 15% for contractor's profit and overheads				140.48
	Cost for 10 metre				1 077.03
	Cost for 1 metre				107.70
	Say				107.70

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.3 25 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8638	**(A)** 25 mm nominal outer dia CPVC pipe	metre	10.00	78.00	780.00
	Add 30% for fillings and wastage etc. on (A)				234.00
	LABOUR				
0116	Fitter	Day	0.12	151.50	18.18
0114	Beldar	Day	0.25	135.25	33.81
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 244.51
	Add 1% for water charges				12.45
	TOTAL				1 256.96
	Add 15% for contractor's profit and overheads				188.54
	Cost for 10 metre				1 445.50
	Cost for 1 metre				144.55
	Say				144.55

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.4 32 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8639	**(A)** 32 mm outer dia CPVC pipe	metre	10.00	105.00	1 050.00
	Add 30% for fillings and wastage etc. on (A)				315.00
	LABOUR				
0116	Fitter	Day	0.12	151.50	18.18
0114	Beldar	Day	0.25	135.25	33.81
	Trenching and refilling etc.				
0 114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 595.51
	Add 1% for water charges				15.96
	TOTAL				1 611.47
	Add 15% for contractor's profit and overheads				241.72
	Cost for 10 metre				1 853.19
	Cost for 1 metre				185.32
	Say				185.30

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.5 40 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8640	**(A)** 40mm outer dia CPVC pipe	metre	10.00	150.00	1 500.00
	Add 30% for fillings and wastage etc. on (A)				450.00
	LABOUR				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				2 197.39
	Add 1% for water charges				21.97
	TOTAL				2 219.36
	Add 15% for contractor's profit and overheads				332.90
	Cost for 10 metre				2 552.26
	Cost for 1 metre				255.23
	Say				255.25

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching .refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.6 50 mm nominal outer dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8641	**(A)** 50mm outer dia CPVC pipe	metre	10.00	245.00	2 450.00
	Add 30% for fillings and wastage etc. on (A)				735.00
	LABOUR				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				3 432.39
	Add 1% for water charges				34.32
	TOTAL				3 466.71
	Add 15% for contractor's profit and overheads				520.01
	Cost for 10 metre				3 986.72
	Cost for 1 metre				398.67
	Say				398.65

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.7 62.50 mm nominal inner dia Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8642	**(A)** Chlorinated polyvinyl- chloride (CPVC) pipe 62.5 mm inner dia.	metre	10.00	783.00	7 830.00
	Add 30% for fillings and wastage etc. on (A)				2349.00
	LABOUR				
0116	Fitter	Day	0.25	151.50	37.88
0114	Beldar	Day	0.66	135.25	89.26
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				10 484.66
	Add 1% for water charges				104.85
	TOTAL				10 589.51
	Add 15% for contractor's profit and overheads				1 588.43
	Cost for 10 metre				12 177.94
	Cost for 1 metre				1 217.79
	Say				1 217.80

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.8 75 mm nominal inner dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8643	**(A)** Chlorinated polyvinyl- chloride (CPVC) pipe 75 mm inner dia.	metre	10.00	1 030.00	1 0,300.00
	Add 30% for fillings and wastage etc. on (A)				3090.00
	LABOUR				
0116	Fitter	Day	0.25	151.50	37.88
0114	Beldar	Day	0.66	135.25	89.26
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				13 695.66
	Add 1 % for water charges				136.96
	TOTAL				13 832.62
	Add 15% for contractor's profit and overheads				2 074.89
	Cost for 10 metre				15 907.51
	Cost for 1 metre				1 590.75
	Say				1 590.75

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching .refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.9 100mm nominal inner dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8644	**(A)**Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia.	metre	10.00	1 430.00	14 300.00
	Add 30% for fillings and wastage etc. on (A)				4290.00
	LABOUR				
0116	Fitter	Day	0.37	151.50	56.06
0114	Beldar	Day	0.97	135.25	131.19
	Trenching and refilling etc.				
0114	Beldar	Day	0.80	135.25	108.20
0115	Coolie	Day	0.80	135.25	108.20
	TOTAL				18 993.65
	Add 1 % for water charges				189.94
	TOTAL				19 183.59
	Add 15% for contractor's profit and overheads				2 877.54
	Cost for 10 metre				22 061.13
	Cost for 1 metre				2 206.11
	Say				2 206.10

18.9 Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, this included jointing of pipes & fittings with one step CPVC solvent cement, trenching refilling & testing of joints complete as per direction of Engineer in Charge. (External work).

18.9.10 150 mm nominal inner dia .Pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
8645	**(A)**Chlorinated Polyvinyl-chloride (CPVC) pipe 150 mm inner dia.	metre	10.00	2 490.00	24 900.00
	Add 30% for fillings and wastage etc. on (A)				7470.00
	LABOUR				
0116	Fitter	Day	0.58	151.50	87.87
0114	Beldar	Day	1.54	135.25	208.28
	Trenching and refilling etc.				
0114	Beldar	Day	1.20	135.25	162.30
0115	Coolie	Day	1.20	135.25	162.30
	TOTAL				32 990.75
	Add 1 % for water charges				329.91
	TOTAL				33 320.66
	Add 15% for contractor's profit and overheads				4 998.10
	Cost for 10 metre				38 318.76
	Cost for 1 metre				3 831.88
	Say				3 831.90

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Iinternal work - Exposed on wall :

18.10.1 15 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1545	**(A)** 15 mm dia G.I. Pipe	metre	11.50	58.00	667.00
2271	**(B)** Carriage of pipe approx weight of 10m = 12.30 kg	tonne	0.014145	47.29	0.67
	Added 15% for fittings and wastage on A & B				
9999	White lead, hemp, oil etc.	L.S.	8.06	1.00	8.06
9999	Cement, sand and grit etc.	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				911.18
	Add 1 % for water charges				9.11
	TOTAL				920.29
	Add 15% for contractor's profit and overheads				138.04
	Cost for 10 metre				1 058.33
	Cost for 1 metre				105.83
	Say				105.85

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Iinternal work - Exposed on wall:
18.10.2 20 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1546	(A) 20 mm dia G.I. Pipe	metre	11.50	77.00	885.50
2271	(B) Carriage of pipe approx weight of 10m = 15.90 kg	tonne	0.018285	47.29	0.86
	Added 15% for fittings and wastage inf (A & B)				
9999	White lead, hemp, oil etc.	L.S.	8.06	1.00	8.06
9999	Cement, sand and grit etc.	L.S.	2.73	1.00	2.73
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.82	141.60	116.11
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 152.52
	Add 1 % for water charges				11.53
	TOTAL				1 164.05
	Add 15% for contractor's profit and overheads				174.61
	Cost for 10 metre				1 338.66
	Cost for 1 metre				133.87
	Say				133.85

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Iinternal work - Exposed on wall:
18.10.3 25 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1547	**(A)** 25 mm dia G.I. Pipe	metre	11.50	109.00	1 253.50
2271	**(B)** Carriage of pipe approx weight of 10m = 24.60 kg	tonne	0.02829	47.29	1.34
	Added 15% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	9.49	1.00	9.49
9999	Cement, sand and grit etc.	L.S.	4.16	1.00	4.16
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 546.52
	Add 1 % for water charges				15.47
	TOTAL				1 561.52
	Add 15% for contractor's profit and overheads				234.30
	Cost for 10 metre				1 796.29
	Cost for 1 metre				179.63
	Say				179.65

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Iinternal work - Exposed on wall :

18.10.4 32 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1548	**(A)** 32 mm dia G.I. Pipe	metre	11.50	140.00	1610.00
2271	**(B)** Carriage of pipe approx weight of 10m = 31.70 kg	tonne	0.036455	47.29	1.72
	Added 15% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	9.49	1.00	9.49
9999	Cement, sand and grit etc.	L.S.	4.16	1.00	4.16
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	0.98	141.60	138.77
0114	Beldar	Day	0.98	135.25	132.54
	TOTAL				1 946.68
	Add 1 % for water charges				19.47
	TOTAL				1 966.15
	Add 15% for contractor's profit and overheads				294.92
	Cost for 10 metre				2 261.07
	Cost for 1 metre				226.11
	Say				226.10

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Iinternal work - Exposed on wall:

18.10.5 40 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1549	**(A)** 40 mm dia G.I. Pipe	metre	11.50	160.00	1 840.50
2271	**(B)** Carriage of pipe approx weight of 10m = 36.50 kg	tonne	0.041975	47.29	1.98
	Added 15% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	13.52	1.00	13.52
9999	Cement, sand and grit etc.	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.31	141.60	185.50
0114	Beldar	Day	1.31	135.25	177.18
	TOTAL				2 273.51
	Add 1% for water charges				22.74
	TOTAL				2 296.25
	Add 15% for contractor's profit and overheads				344.44
	Cost for 10 metre				2 640.69
	Cost for 1 metre				264.07
	Say				264.05

18.10 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Iinternal work - Exposed on wall:

18.10.6 50 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1550	**(A)** 50 mm dia G.I. Pipe	metre	11.50	211.00	2 426.50
2271	**(B)** Carriage of pipe approx weight of 10m = 51.70 kg	tonne	0.059455	47.29	2.81
	Added 15% for fittings and wastage in (A & B)				

Code	Description	Unit	Quantity	Rate	Amount
9999	White lead, hemp, oil etc.	L.S.	13.52	1.00	13.52
9999	Cement, sand and grit etc.	L.S.	5.33	1.00	5.33
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. Fitter	Day	1.64	141.60	232.22
0114	Beldar	Day	1.64	135.25	221.81
	TOTAL				2 952.19
	Add 1% for water charges				29.52
	TOTAL				2 981.71
	Add15% for contractor's profit and overheads				447.26
	Cost for 10 metre				3 428.97
	Cost for 1 metre				342.90
	Say				342.90

18.11 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall

18.11.1 15 mm dia nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1545	**(A)** 15 mm dia G.I. Pipe	metre	11.50	58.00	667.00
2271	**(B)** Carriage of pipe approx weight of 10m = 12.30 kg	tonne	0.014145	47.29	0.67
	Added 15% for fittings and wastage inf (A & B)				
9999	White lead, hemp, oil etc.	L.S.	8.06	1.00	8.06
	Painting G.I. pipe with anti-corrosive bitumastic paint two or more coats				
(C)	(Rate same as per item no. 18.40.1	metre	10.00	2.60	26.00
	Making chases upto 7.5x7.5cm in walls and making good the same				
(D)	Rate as per item no. 18.78	metre	10.00	36.65	366.50
	Labour :-				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1 300.95
	Add for water charges @ 1% on all except C+D				9.08
	TOTAL				1 310.03
	Add for contractor's profit & overheads @ 15 % on all except C+D				137.63
	Cost for 10 metre				1 447.66
	Cost for 1 metre				144.77
	Say				144.75

18.11 Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall

18.11.2 20 mm dia nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1546	**(A)** 20 mm dia G.I. Pipe	metre	11.50	77.00	885.50
2271	**(B)** Carriage of pipe approx weight of 10m = 15.90 kg	tonne	0.018285	47.29	0.86
	Added 15% for fittings and wastage in (A & B)				

Code	Description	Unit	Quantity	Rate	Amount
9999	White lead, hemp, oil etc.	L.S.	8.06	1.00	8.06
(C)	Painting G.I. pipe with anti-corrosive bitumastic paint two or more coats (Rate same as per item no. 18.40.2	metre	10.00	3.05	30.50
(D)	Making chases upto 7.5x7.5cm in walls and making good the same (Rate as per item no. 18.78	metre	10.00	36.65	366.50
	Labour :-				
0116	Fitter	Day	0.33	151.50	50.00
0117	Asstt. fitter	Day	0.66	141.60	93.46
0114	Beldar	Day	0.66	135.25	89.26
	TOTAL				1524.14
	Add for water charges @ 1% on all except C+D				11.27
	TOTAL				1535.41
	Add for contractor's profit & overheads @ 15 % on all except C+D				170.76
	Cost for 10 metre				1706.17
	Cost for 1 metre				170.62
	Say				170.60

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work):

18.12.1 15 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1545	**(A)** 15 mm dia G.I. Pipes	metre	10.20	58.00	591.60
2271	**(B)** Carriage of pipe approx weight of 10m = 12.30 kg	tonne	0.012546	47.29	0.59
	Added 20% for fittings and wastage inf (A & B)				
9999	White lead, hemp, oil etc.	L.S.	5.33	1.00	5.33
	Labour :-				
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				809.80
	Add 1% for water charges				8.10
	TOTAL				817.90
	Add 15% for contractor's profit and overheads				122.68
	Cost for 10 metre				940.58
	Cost for 1 metre				94.06
	Say				94.05

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work):

18.12.2 20 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1546	**(A)** 20 mm dia G.I. Pipes	metre	10.20	77.00	785.40
2271	**(B)** Carriage of pipe approx weight of 10m = 15.90 kg	tonne	0.016218	47.29	0.77
	Added 2% for fittings and wastage in (A & B)				

Code	Description	Unit	Quantity	Rate	Amount
9999	White lead, hemp, oil etc.	L.S.	5.33	1.00	5.33
	Labour :-				
0116	Fitter	Day	0.08	151.50	12.12
0114	Beldar	Day	0.16	135.25	21.64
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 003.78
	Add 1% for water charges				10.04
	TOTAL				1 013.82
	Add 15% for contractor's profit and overheads				152.07
	Cost for 10 metre				1 165.89
	Cost for 1 metre				116.59
	Say				116.60

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work):

18.12.3 25 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1547	**(A)** 25 mm dia G.I. Pipes	metre	10.20	109.00	1 111.80
2271	**(B)** Carriage of pipe approx weight of 10m = 24.60 kg	tonne	0.025092	47.29	1.19
	Added 2% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	6.76	1.00	6.76
	Labour :-				
0116	Fitter	Day	0.12	151.50	18.18
0114	Beldar	Day	0.25	135.25	33.81
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 350.26
	Add 1% for water charges				13.50
	TOTAL				1 363.76
	Add 15% for contractor's profit and overheads				204.56
	Cost for 10 metre				1 568.32
	Cost for 1 metre				156.83
	Say				156.85

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work):

18.12.4 32 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1548	**(A)** 32 mm dia G.I. Pipes	metre	10.20	140.00	1 428.00
2271	**(B)** Carriage of pipe approx weight of 10m = 31.70 kg	tonne	0.032334	47.29	1.53
	Added 2% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	6.76	1.00	6.76
	Labour :-				
0116	Fitter	Day	0.12	151.50	18.18
0114	Beldar	Day	0.25	135.25	33.81
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 666.80
	Add 1% for water charges				16.67
	TOTAL				1 683.47
	Add 15% for contractor's profit and overheads				252.52
	Cost for 10 metre				1 935.99
	Cost for 1 metre				193.60
	Say				193.60

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work):

18.12.5 40 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1549	**(A)** 40 mm dia G.I. Pipes	metre	10.20	160.00	1 632.00
2271	**(B)** Carriage of pipe approx weight of 10m = 36.50 kg	tonne	0.03723	47.29	1.76
	Added 2% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	9.49	1.00	9.49
	Labour :-				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				1 890.64
	Add 1% for water charges				18.91
	TOTAL				1 909.55
	Add 15% for contractor's profit and overheads				286.43
	Cost for 10 metre				2 195.98
	Cost for 1 metre				219.60
	Say				219.60

18.12 Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. (external work):

18.12.6 50 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1550	**(A)** 50 mm dia G.I. Pipes	metre	10.20	211.00	2 152.00
2271	**(B)** Carriage of pipe approx weight of 10m = 51.70 kg	tonne	0.05273	47.29	2.49
	Added 2% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	9.49	1.00	9.49
	Labour :-				
0116	Fitter	Day	0.16	151.50	24.24
0114	Beldar	Day	0.33	135.25	44.63
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				2 411.57
	Add 1% for water charges				24.12
	TOTAL				2 435.69
	Add 15% for contractor's profit and overheads				365.35
	Cost for 10 metre				2 801.04
	Cost for 1 metre				280.10
	Say				280.10

18.12 Providing and fixing G.I. pipes complete with G.I. fittingsincluding trenching and refilling etc. (external work):

18.12.7 65 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1551	**(A)** 65 mm dia G.I. Pipes	metre	10.20	269.00	2 743.80
2271	**(B)** Carriage of pipe approx weight of 10m = 66.30 kg	tonne	0.067626	47.29	3.20
	Added 2% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	13.52	1.00	13.52
	Labour :-				
0116	Fitter	Day	0.25	151.50	37.88
0114	Beldar	Day	0.66	135.25	89.26
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				3 066.18
	Add 1% for water charges				30.66
	TOTAL				3 096.84
	Add 15% for contractor's profit and overheads				464.53
	Cost for 10 metre				3 561.37
	Cost for 1 metre				356.14
	Say				356.15

18.12 Providing and fixing G.I. pipes complete with G.I. fittingsincluding trenching and refilling etc. (external work):

18.12.8 80 mm dia. nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
1552	**(A)** 80 mm dia G.I. Pipes	metre	10.20	355.00	3 621.00
2271	**(B)** Carriage of pipe approx weight of 10m = 86.40 kg	tonne	0.088128	47.29	4.17
	Added 2% for fittings and wastage in (A & B)				
9999	White lead, hemp, oil etc.	L.S.	13.52	1.00	13.52
	Labour :-				
0116	Fitter	Day	0.25	151.50	37.88
0114	Beldar	Day	0.66	135.25	89.26
	Trenching and refilling etc.				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.66	135.25	89.26
	TOTAL				3 944.35
	Add 1% for water charges				39.44
	TOTAL				3 983.79
	Add 15% for contractor's profit and overheads				597.57
	Cost for 10 metre				4 581.36
	Cost for 1 metre				458.14
	Say				458.15

18.13 Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :

18.13.1 25 to 40 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one connection.				
	Take 25mm dia as an average size.				
	Materials:-				
1608	G.I. Tee 25 mm dia	each	1.00	38.00	38.00
1555	G.L. jam nut 25mm	each	1.00	5.00	5.00
9999	Carriage of materials and sundries	L.S.	5.33	1.00	5.33
	Labour :-				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				142.96
	Add 1 % for water charges				1.43
	TOTAL				144.39
	Add 15% for contractor's profit and overheads				21.66
	Cost for one connection				166.05
	Say				166.05

18.13 Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :

18.13.2 50 to 80 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one connection.				
	Take 65mm dia as an average size.				
	Materials:-				
1612	G.I. Tee 25 mm dia	each	1.00	215.00	215.00
1559	G.I. jam nut 65mm	each	1.00	15.00	15.00
9999	Carriage of materials and sundries	L.S.	5.33	1.00	5.33
	Labour :-				
0116	Fitter	Day	0.45	151.50	68.18
0114	Beldar	Day	0.45	135.25	60.86
	TOTAL				364.37
	Add 1 % for water charges				3.64
	TOTAL				368.01
	Add 15% for contractor's profit and overheads				55.20
	Cost for one connection				423.21
	Say				423.20

18.14 Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one meter with stop cock				
	Materials :-				
1555	G .I. Jam nut 25mm dia.	each	1.00	5.00	5.00
9999	Carriage of materials and sundries	L.S.	5.33	1.00	5.33
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				104.96

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				1.05
	TOTAL				106.01
	Add 15% for contractor's profit and overheads				15.90
	Cost for one metre with stop cock				121.91
	Say				121.90

18.15 Providing and fixing brass bib cock of approved quality :
18.15.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1339	15mm dia. brass bib cock.	each	1.00	157.00	157.00
9999	Carriage of materials and fixing charge	L.S.	8.06	1.00	8.06
	TOTAL				165.06
	Add 1% for water charges				1.65
	TOTAL.				166.71
	Add 15% for contractor's profit and overheads				25.01
	Cost of one no.				191.72
	Say				191.70

18.15 Providing and fixing brass bib cock of approved quality:
18.15.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1340	20mm dia. brass bih cock.	each	1.00	193.00	193.00
9999	Carriage of materials and fixing charge	L.S.	9.49	1.00	9.49
	TOTAL				202.49
	Add 1 % for water charges				2.02
	TOTAL				204.51
	Add 15% for contractor's profit and overheads				30.68
	Cost of one no.				235.19
	Say				235.20

18.16 Providing and fixing brass stop cock of approved quality :
18.16.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1342	15mm dia. brass bib cock,	each	1.00	157.00	157.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.00	8.06
	TOTAL				165.06
	Add 1% for water charges				1.65
	TOTAL				166.71
	Add 15% for contractor's profit and overheads				25.01
	Cost of one no.				191.72
	Say				191.70

18.16 Providing and fixing brass stop cock of approved quality :
18.16.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1343	20mm dia. brass bib cock,	each	1.0	193.00	193.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of materials and fixing charges	L.S.	9.49	1.00	9.79
	TOTAL				202.49
	Add 1% for water charges				2.02
	TOTAL				204.51
	Add 15% for contractor's profit and overheads				30.68
	Cost of one no.				235.19
	Say				235.20

18.17 Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):

18.17.1 25 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1927	25mm dia. Gun metal gate valve with wheel	each	1.00	235.00	235.00
9999	Carriage of materials and fixing charges	L.S.	10.79	1.00	10.79
	TOTAL				245.79
	Add 1 % for water charges				2.46
	TOTAL				248.25
	Add 15% for contractor's profit and overheads				37.25
	Cost of one no.				285.49
	Say				285.50

18.17 Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)

18.17.2 32 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1928	32mm dia. Gun metal gate valve with wheel	each	1.00	296.00	296.00
9999	Carriage of material and fixing charge	L.S.	12.22	1.00	12.22
	TOTAL				308.22
	Add 1 % for water charges				3.08
	TOTAL				311.30
	Add 15% for contractor's profit and overheads				46.70
	Cost of one no.				358.00
	Say				358.00

18.17 Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)

18.17.3 40 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1929	40mm dia Gun metal gate valve with wheel	each	1.00	330.00	330.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				343.52
	Add 1 % for water charges				3.44
	TOTAL				346.96
	Add 15% for contractor's profit and overheads				52.04
	Cost of one no.				399.00
	Say				399.00

18.17 Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):

18.17.4 50 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1930	50mm dia Gun metal gate valve with wheel	each	1.00	438.00	483.00
9999	Carriage of materials and fixing charges	L.S.	14.82	1.00	14.82
	TOTAL				497.82
	Add 1 % for water charges				4.98
	TOTAL				502.80
	Add 15% for contractor's profit and overheads				75.42
	Cost of one no.				578.22
	Say				578.20

18.17 Providing and fixing gun metal gate valve with C.I wheel of approved quality (screwed end):

18.17.5 65 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1931	65mm dia Gun metal gate valve with wheel	each	1.00	700.00	700.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.00	16.12
	TOTAL				716.00
	Add 1 % for water charges				7.16
	TOTAL				723.28
	Add 15% for contractor's profit and overheads				108.49
	Cost of one no.				831.77
	Say				831.75

18.17 Providing and fixing gun metal gate valve with C.I.wheel of approved quality (screwed end):

18.17.6 80 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1932	80mm dia Gun metal gate valve with wheel	each	1.00	1160.00	1160.00
9999	Carriage of materials and fixing charges	L.S.	18.85	1.00	18.85
	TOTAL				1178.85
	Add 1 % for water charges				11.79
	TOTAL				1190.64
	Add 15% for contractor's profit and overheads				178.60
	Cost of one no.				1369.24
	Say				1369.25

18.18 Providing and fixing ball valve (brass) of approved quality complete :

18.18.1 High or low pressure with plastic floats:

18.18.1.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1922	15mm ball valve	each	1.00	175.00	175.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of materials and fixing charges	L.S.	21.58	1.00	21.58
	TOTAL				196.58
	Add 1 % for water charges				1.97
	TOTAL				198.55
	Add 15% for contractor's profit and overheads				29.78
	Cost of one no.				228.33
	Say				228.35

18.18 Providing and fixing ball valve (brass) of approved quality complete :
18.18.1 High or low pressure with plastic floats :
18.18.1.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1923	20mm ball valve	each	1.00	260.00	260.00
9999	Carriage of materials and fixing charges	L.S.	26.91	1.00	26.91
	TOTAL				286.91
	Add 1 % for water charges				2.87
	TOTAL				289.78
	Add 15% for contractor's profit and overheads				43.47
	Cost of one no.				333.25
	Say				333.25

18.18 Providing and fixing ball valve (brass) of approved quality complete :
18.18.1 High or low pressure with plastic floats:
18.18.1.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1924	25mm ball valve	each	1.00	300.00	300.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.00	32.24
	TOTAL				332.24
	Add 1 % for water charges				3.32
	TOTAL				333.56
	Add 15% for contractor's profit and overheads				50.33
	Cost of one no.				385.89
	Say				385.90

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.1 25 mm nominal bore
18.19.1.1 Horizontal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1933	25mm non return valve	each	1.00	238.00	238.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				251.52
	Add 1 % for water charges				2.52
	TOTAL				254.04
	Add 15% for contractor's profit and overheads				38.11
	Cost of one no.				292.15
	Say				292.15

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.1 25 mm nominal bore
18.19.1.2 Vertical

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
3080	25mm non return valve	each	1.00	260.00	260.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				273.52
	Add 1 % for water charges				2.74
	TOTAL				276.26
	Add 15% for contractor's profit and overheads				41.44
	Cost of one no.				317.70
	Say				317.70

18.19 Providing and fixing gun metal non- return valve of approved quality (screwed end):
18.19.2 32 mm nominal bore
18.19.2.1 Horizontal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1934	25mm non return valve	each	1.00	305.00	305.00
9999	Carriage of materials and fixing charges	L.S.	14.82	1.00	14.82
	TOTAL				319.82
	Add 1 % for water charges				3.20
	TOTAL				323.02
	Add 15% for contractor's profit and overheads				48.45
	Cost of one no.				371.47
	Say				371.45

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.2 32 mm nominal bore
18.19.2.2 Vertical

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
3084	32mm non return valve	each	1.00	385.00	385.00
9999	Carriage of materials and fixing charges	L.S.	14.82	1.00	14.82
	TOTAL				399.82
	Add 1 % for water charges				4.00
	TOTAL				403.82
	Add 15% for contractor's profit and overheads				60.57
	Cost of one no.				464.39
	Say				464.40

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.3 40 mm nominal bore
18.19.3.1 Horizontal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1935	40mm non-return valve	each	1.00	410.00	410.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.00	16.12

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				426.12
	Add 1 % for water charges				4.26
	TOTAL				430.38
	Add 15% for contractor's profit and overheads				64.56
	Cost of one no.				494.94
	Say				494.95

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.3 40 mm nominal bore
18.19.3.2 Vertical

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
3088	40mm non-return valve	each	1.00	505.00	505.00
9999	Carriage of materials and fixing charges	L.S.	16.12	1.00	16.12
	TOTAL				521.12
	Add 1 % for water charges				5.21
	TOTAL				526.33
	Add 15% for contractor's profit and overheads				78.95
	Cost of one no.				605.28
	Say				605.30

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.4 50 mm nominal bore
18.19.4.1 Horizontal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1936	50mm non return valve	each	1.00	618.00	618.00
9999	Carriage of materials and fixing charges	L.S.	17.55	1.00	17.55
	TOTAL				635.55
	Add 1 % for water charges				6.36
	TOTAL				641.91
	Add 15% for contractor's profit and overheads				96.29
	Cost of one no.				738.20
	Say				738.20

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.4 50 mm nominal bore
18.19.4.2 Vertical

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
3092	50mm non return valve	each	1.00	712.00	712.00
9999	Carriage of materials and fixing charges	L.S.	17.55	1.00	17.55
	TOTAL				729.55
	Add 1 % for water charges				7.30
	TOTAL				736.85
	Add 15% for contractor's profit and overheads				110.53
	Cost of one no.				847.38
	Say				847.40

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end):
18.19.5 65 mm nominal bore

18.19.5.1 Horizontal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1937	65mm non return valve	each	1.00	1085.00	1085.00
9999	Carriage of materials and fixing charges	L.S.	18.85	1.00	18.85
	TOTAL				1103.85
	Add 1 % for water charges				11.04
	TOTAL				1114.89
	Add 15% for contractor's profit and overheads				167.23
	Cost of one no.				1282.12
	Say				1282.10

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end)
18.19.5 65 mm nominal bore.
18.19.5.2 Vertical

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
3096	65mm non return valve	each	1.00	1245.00	1245.00
9999	Carriage of materials and fixing charges	L.S.	18.85	1.00	18.85
	TOTAL				1236.85
	Add 1 % for water charges				12.64
	TOTAL				1276.49
	Add 15% for contractor's profit and overheads				191.47
	Cost of one no.				1467.96
	Say				1467.95

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end)
18.19.6 80 mm nominal bore
18.19.6.1 Horizontal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1938	80mm non return valve	each	1.00	1540.00	1540.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				1560.28
	Add 1 % for water charges				15.60
	TOTAL				1575.88
	Add 15% for contractor's profit and overheads				236.38
	Cost of one no.				1812.26
	Say				1812.25

18.19 Providing and fixing gun metal non-return valve of approved quality (screwed end)
18.19.6 80 mm nominal bore
18.19.6.2 Vertical

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
3300	80mm non return valve	each	1.00	2038.00	2038.00
9999	Carriage of materials and fixing charges	L.S.	20.28	1.00	20.28
	TOTAL				2058.28
	Add 1 % for water charges				20.58
	TOTAL				2078.86
	Add 15% for contractor's profit and overheads				311.83
	Cost of one no.				2390.69
	Say				2390.70

18.20 Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :

18.20.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1360	15mrn diameter brass-ferrule	each	1.00	80.00	80.00
9999	Carriage of material and fixing charges	L.S.	40.30	1.00	40.30
	TOTAL				120.30
	Add 1% for water charges				1.20
	TOTAL				121.50
	Add 15% for contractor's profit and overheads				18.23
	Cost of one no.				139.73
	Say				139.75

18.20 Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :

18.20.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1361	20mm diameter brass-ferrule,	each	1.00	114.00	114.00
9999	Carriage of material and fixing charges	L.S.	47.19	1.00	47.19
	TOTAL				161.19
	Add 1% for water charges				1.61
	TOTAL				162.80
	Add 15% for contractor's profit and overheads				24.42
	Cost of one no.				187.22
	Say				187.20

18.20 Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main

18.20.3 25 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1362	25mm diameter brass-ferrule,	each	1.00	156.00	156.00
9999	Carriage of material and fixing charges	L.S.	53.82	1.00	53.82
	TOTAL				209.82
	Add 1% for water charges				2.10
	TOTAL				211.92
	Add 15% for contractor's profit and overheads				31.79
	Cost of one no.				243.71
	Say				243.70

18.21 Providing and fixing uplasticised PVC connection pipe with brass unions :

18.21.1 30 cm length

18.21.1.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1687	15mm P.V.C. connection.pipe with brass	each	1.0	18.00	18.00

Code	Description	Unit	Quantity	Rate	Amount
	Unions				
9999	Carriage of material and fixing charges	L.S.	12.22	1.00	12.22
	TOTAL				30.22
	Add 1% for water charges				0.30
	TOTAL				30.52
	Add15% for contractor's profit and overheads				4.58
	Cost of one no.				35.10
	Say				35.10

18.21 Providing and fixing uplasticised PVC connection pipe with brass unions :
18.21.1 30 cm length
18.21.1.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1688	15mm P.V.C. connection.pipe with brass Unions	each	1.0	25.00	25.00
9999	Carriage of material and fixing charges	L.S.	12.22	1.00	12.22
	TOTAL				37.22
	Add 1% for water charges				0.37
	TOTAL				37.59
	Add15% for contractor's profit and overheads				5.64
	Cost of one no.				43.23
	Say				43.25

18.21 Providing and fixing uplasticised PVC connection pipe with brass unions :
18.21.2 45 cm length
18.21.2.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1689	15mm P.V.C. connection.pipe with brass Unions	each	1.00	25.00	25.00
9999	Carriage of material and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				38.52
	Add 1% for water charges				0.39
	TOTAL				38.91
	Add15% for contractor's profit and overheads				5.84
	Cost of one no.				44.75
	Say				44.75

18.21 Providing and fixing uplasticised PVC connection pipe with brass unions :
18.21.2 45 cm length
18.21.2.2 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1690	20mm P.V.C. connection pipe with brass unions	each	1.00	35.00	35.00
9999	Carriage of material and fixing charges	L.S.	13.52	1.00	13.52

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				48.52
	Add 1% for water charges				0.49
	TOTAL				49.01
	Add 15% for contractor's profit and overheads				7.35
	Cost of one no.				56.36
	Say				56.35

18.22 Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet:
18.22.1 100 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1878	100mm dia. C,P., brass shower rose	each	1.00	28.00	28.00
9999	Carriage of material and fixing charges	L.S.	6.76	1.00	6.76
	TOTAL				34.76
	Add 1% for water charges				0.35
	TOTAL				35.11
	Add 15% for contractor's profit and overheads				5.27
	Cost of one no.				40.38
	Say				40.40

18.22 Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet:
18.22.2 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials :-				
1879	150mm dia. C,P., brass shower rose	each	1.00	40.00	40.00
9999	Carriage of material and fixing charges	L.S.	8.06	1.00	8.06
	TOTAL				48.06
	Add 1% for water charges				0.48
	TOTAL				48.54
	Add 15% for contractor's profit and overheads				7.28
	Cost of one no.				55.82
	Say				55.80

18.23 Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5.14 quintal				
	10 m of 200 mm dia C.I. pipe class 'A'				
	Weight = (2x257) = 514kg = 5.14 quintal				
	Labour for laying pipe				
0116	Fitter	Day	0.17	151.50	25.76
0117	Asstt. Fitter	Day	0.17	141.60	24.07
0114	Beldar	Day	1.33	135.25	179.88
9999	Sundries	L.S.	16.12	1.00	16.12
	TOTAL				245.83
	Add 1% for water charges				2.46
	TOTAL				248.29
	Add 15% for contractor's profit and overheads				37.24
	Cost for 5.14 quintal				285.53
	Cost per quintal				55.55
	Say				55.55

18.24 Laying in position S&S or flanged C.I. special such tees, bends collars, tapers and caps etc. (excluding cost of specials).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 7quintal 10 Nos. Tee 200x150mm Weight = 70x10 = 700kg.				
	Labour for laying tee-				
0116	Fitter	Day	0.93	151.50	140.90
0117	Asst. Fitter	Day	0.62	141.60	87.79
0114	Beldar	Day	2.48	135.25	335.42
9999	Sundries	L.S.	40.17	1.00	40.17
	TOTAL				604.28
	Add 1% for water charges				6.04
	TOTAL				610.32
	Add 15% for contractor's profit and overheads				91.55
	Cost for 7 quintal				701.87
	Cost per quintal				100.27
	Say				100.25

18.25 Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class)

18.25.1 Upto 300 mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
1464	Cost of specials	quintal	1.00	2400.00	2400.00
2309	Carriage of material	tonne	0.10	47.29	4.73
	LABOUR				
(A)	For laying rate as per Item No 18.24	quintal	1.00	100.25	100.25
	TOTAL				2504.98
	Add 1% for water charges on all except A				24.05
	TOTAL				2529.03
	Add 15% for contractor's profit and overheads on all except A				364.32
	Cost for one quintal				2893.35
	Say				2893.35

18.25 Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc.(Heavy class):

18.25.2 Over 300 mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
1466	Cost of specials	quintal	1.00	2595.00	2595.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	LABOUR				
(A)	For laying rate as per Item No 18.24	quintal	1.00	100.25	100.25
	TOTAL				2699.98
	Add 1% for water charges on all except A				26.00
	TOTAL				2725.98
	Add 15% for contractor's profit and overheads on all except A				393.86
	Cost for one quintal				3119.84
	Say				3119.85

18.26 Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :

18.26.1 Upto 300 mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
1468	Cost of specials	quintal	1.00	4320.00	4320.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	LABOUR				
(A)	For laying rate as per Item No 18.24	quintal	1.00	100.25	100.25
	TOTAL				4424.98
	Add 1% for water charges on all except 'A'				43.25
	TOTAL				4468.23
	Add 15% for contractor's profit and overheads on all except 'A'				655.20
	Cost for one quintal				5123.43
	Say				5123.45

18.26 Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :

18.26.2 Over 300 mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
1470	Cost of specials	quintal	1.00	4772.00	4772.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	LABOUR				
(A)	For laying rate as per Item No 18.24	quintal	1.00	100.25	100.25
	TOTAL				4876.98
	Add 1% for water charges on all except B				47.77
	TOTAL				4924.75
	Add 15% for contractor's profit and overheads on all except 'A'				723.68
	Cost for one quintal				5648.43
	Say				5648.45

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.1 100 mm dia, pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	100mm dia. spun iron pipes (in 5.5 m lengths) weightof 1m pipe = 19.820 kg				
	Weight of 10m pipes 19.820x10= 198.20 Kg				
7697	Cost of pipe	metre	10.00	624.00	6240.00
2319	Carriage of pipes	100 m.	10.00	116.30	11.63
	Labour for lay ing				
(A)	Rate same as per item no 18.23	quintal	1.98	55.55	109.99
	TOTAL				6 361.62
	Add for water charges @1% on all except 'A'				62.52
	TOTAL				6 424.14
	Add for contractor's profit and overheads @15%onallexecpt'A'				947.12
	Cost for 10 metre				7 371.26
	Cost per metre				737.13
	Say				737.15

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS- 1536

18.27.2 125 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	125mm dia. spun iron pipes (in 5.5 m lengths) weightof 1m pipe = 25.82 kg				
	Weight of 10m pipes 25.820x10 = 258.20 Kg				
7698	Cost of pipe	metre	10.00	763.00	7 630.00
2320	Carriage of pipes	100 m.	10.00	155.35	15.54
	Labour for laying				
(A)	Rate same as per item no 18.23	quintal	2.58	55.55	143.32
	TOTAL				7788.86
	Add for water charges @1% on all except 'A'				76.46
	TOTAL				7865.32
	Add for contractor's profit and overheads @ 15% on all execpt 'A'				1158.30
	Cost for 10 metre				9023.62
	Cost per metre				902.36
	Say				902.35

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS -1536

18.27.3 150 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				

Code	Description	Unit	Quantity	Rate	Amount
	150mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 32.18 kg Weight of 10m pipes 32.18x10 = 321.80 Kg				
7699	Cost of pipe	metre	10.00	901.00	9010.00
2321	Carriage of pipes	100 m.	10.00	193.83	19.38
	Labour for laying				
(A)	Rate same as per item no 18.23	quintal	3.22	55.55	178.87
	TOTAL				9208.25
	Add for water charges @ 1 % on all except 'A'				90.29
	TOTAL				9298.54
	Add for contractor's profit and overheads @ 15 % on all execpt 'A'				1367.95
	Cost for 10 metre				10666.49
	Cost per metre				1066.65
	Say				1066.65

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS- 1536:

18.27.4 200 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Materials :- 200mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 47.090 kg Weight of 10m pipes 47.090x10 = 470.90 Kg				
7700	Cost of pipe	metre	10.00	1252.00	1252.00
2322	Carriage of pipes	100m.	10.00	315.30	31.53
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	4.71	55.55	261.64
	TOTAL				12813.17
	Add for water charges @1% on all except 'A'				125.52
	TOTAL				12938.69
	Add for contractor's profit and overheads ©15% on all execpt 'A'				1901.56
	Cost for 10 metre				14840.25
	Cost per metre				1484.03
	Say				1484.00

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536:

18.27.5 250 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Materials :- 250mm dia. spun iron pipes (in 5.5 m lengths) weightof 1m pipe = 63.450 kg Weight of 10m pipes 63.450x10 = 634.50 Kg				
7701	Cost of pipe	metre	10.00	1779.00	17790.00
2323	Carriage of pipes	100m.	10.00	448.05	44.80

Code	Description	Unit	Quantity	Rate	Amount
	Labour for laying				
(A)	Rate same as per item no18.23	quintal	6.35	55.55	352.74
	TOTAL				18187.54
	Add for water charges @1% on all except 'A'				178.35
	TOTAL				18365.89
	Add for contractor's profit and overheads				2701.97
	@ 15% on all execpt 'A'				
	Cost for 10 metre				21067.86
	Cost per metre				2106.79
	Say				2106.80

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.6 300 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials:-				
	300mm dia. spun iron pipes (in 5.5 m lengths)				
	weight of 1m pipe = 81.820 kg				
	Weight of 10m pipes 81.820x10 = 818.20 Kg				
7702	Cost of pipe	metre	10.00	2366.00	23660.00
2324	Carriage of pipes	100m.	10.00	553.80	55.38
	Labour for laying				
(A)	Rate same as per item no 18.23	quintal	8.18	55.55	454.40
	TOTAL				24169.78
	Add for water charges @1% on all except 'A'				237.15
	TOTAL				24406.93
	Add for contractor's profit and overheads				3592.88
	@15% on all execpt 'A'				
	Cost for 10 metre				27999.81
	Cost per metre				2799.98
	Say				2800.00

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.7 350 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	350mm dia. spun iron pipes (in 5.5 m lengths)				
	weight of 1m pipe = 103.10 kg				
	Weight of 10m pipes 103.10x10 =1031.00 kg				
7703	Cost of pipe	metre	10.00	2918.00	29180.00
2325	Carriage of pipes	100 m.	10.00	775.32	77.53
	Labour for laying				
(A)	Rate same as per item no 18.23	quintal	10.31	55.55	572.72
	TOTAL				29830.25
	Add for water charges @1% on all except 'A'				292.58

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				30122.83
	Add for contractor's profit and overheads @ 15% on all execpt 'A'				4432.52
	Cost for 10 metre				34555.35
	Cost per metre				3455.54
	Say				3455.55

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.8 400 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	400mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 125.40 kg				
	Weight of 10m pipes 125.450x10 = 1254.50 Kg				
7704	Cost of pipe	metre	10.00	3574.00	35740.00
2326	Carriage of pipes	100m	10.00	1057.26	105.73
	Labour for laying				
	(A) Rate same as per item no18.23	quintal	12.55	55.55	697.15
	TOTAL				36542.88
	Add for water charges @1% on all except 'A'				358.46
	TOTAL				36901.34
	Add for contractor's profit and overheads @15%oonallexecpt 'A'				5430.63
	Cost for 10 metre				42331.97
	Cost per metre				4233.20
	Say				4233.20

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.9 450 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	450mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 151.27 kg				
	Weight of 10m pipes 151.270x 10 = 1512.70 Kg				
7705	Cost of pipe	metre	10.00	4276.00	42760.00
2327	Carriage of pipes	100 m.	10.00	1292.20	129.22
	Labour for laying				
(A)	Rate same as per item no18.23	quintal	15.13	55.55	840.47
	TOTAL				43729.69
	Add for water charges @1% on all except 'A'				428.89
	TOTAL				44158.58
	Add for contractor's profit and overheads @15%on all execpt 'A'				6497.72
	Cost for 10 metre				50656.30
	Cost per metre				5065.63
	Say				5065.65

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.10 500 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	500mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 177.09 kg				
	Weight of 10m pipes 177.090x10 = 1770.90 Kg				
7706	Cost of pipe	metre	10.00	5211.00	52110.00
2328	Carriage of pipes	100m.	10.00	1292.20	129.22
	Labour for laying				
(A)	Rate same as per item no18.23	quintal	17.71	55.55	983.79
	TOTAL				53223.01
	Add for water charges @1% on all except 'A'				522.39
	TOTAL				53745.40
	Add for contractor's profit and overheads @15% on all execpt 'A'				7914.24
	Cost for 10 metre				61659.64
	Cost per metre				61654.96
	Say				6165.95

18.27 Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536

18.27.11 600 mm dia. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	600mm dia. spun iron pipes (in 5.5 m lengths) weight of 1m pipe = 236.00 kg				
	Weight of 10m pipes 236.000x10 = 2360.00 Kg				
7707	Cost of pipe	metre	10.00	6884.00	68840.00
2329	Carriage of pipes	100m.	10.00	1938.30	193.83
	Labour for laying				
(A)	Rate same as per item no 18.23	quintal	23.60	55.55	1310.98
	TOTAL				70344.81
	Add for water charges @1% on all except 'A'				690.34
	TOTAL				71035.15
	Add for contractor's profit and overheads @l5%on all execpt 'A'				10458.63
	Cost for 10 metre				81493.78
	Cost per metre				8149.38
	Say				8149.40

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.1 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.17x 10 =1.70 kg.	Kilogram	1.70	30.00	51.00
0761	Fuel wood	quintal	0.28	265.00	74.20
0771	Kerosene oil	litre	0.38	19.00	7.22
9999	Sundries	L.S.	6.76	1.00	6.76
9999	Carriage of materials	L.S.	5.33	1.00	5.33
	Labour-				
0116	Fitter	Day	1.00	151.50	151.50
0 117	Asstt. Fitter	Day	1.00	141.60	141.60
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				708.11
	Add 1 % for water charges				7.08
	TOTAL				715.19
	Add 15% for contractor's profit and overheads				107.28
	Cost for 10 joints				822.47
	Cost for one joint				82.25
	Say				82.25

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.2 125 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.20x10=2.00 kg.	kilogram	2.00	30.00	60.00
0761	Fuel wood	quintal	0.37	265.00	98.05
0771	Kersosene oil	litre	0.76	19.00	14.44
9999	Sundries	L.S.	9.49	1.00	9.49
9999	Carriage of materials	L.S	9.49	1.00	9.49
	Labour-				
0116	Fitter	Day	1.50	151.50	227.25
0117	Asstt. Fitter	Day	1.50	141.60	212.40
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				1036.87
	Add 1 % for water charges				10.37
	TOTAL				1047.24
	Add 15% for contractor's profit and overheads				157.09
	Cost for 10 joints				1204.33
	Cost for one joint				120.43
	Say				120.45

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.3 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				

Code	Description	Unit	Quantity	Rate	Amount
1881	Spun yarn 0.23x10=2.30 kg,	kilogram	2.30	30.00	69.00
0761	Fuel Wood	quintal	0.42	265.00	111.30
0771	Kerosene oil	litre	0.76	19.00	14.44
9999	Sundries	L.S.	10.79	1.00	10.79
9999	Carriage of materials	L.S.	10.79	1.00	10.79
	Labour-				
0116	Fitter	Day	1.50	151.50	227.25
0117	Asstt. Fitter	Day	1.50	141.60	212.40
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				1061.72
	Add 1 % for water charges				10.62
	TOTAL				1072.34
	Add 15% for contractor's profit and overheads				160.85
	Cost for 10 joints				1233.19
	Cost for one joint				123.32
	Say				123.30

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.4 200 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.3x10=3.00 kg.	kilogram	3.00	30.00	90.00
0761	Fuel wood	quintal	0.56	265.00	148.40
0771	Kerosene oil	litre	0.76	19.00	14.44
9999	Sundries	L.S.	13.52	1.00	13.52
9999	Carriage of materials	L.S.	13.52	1.00	13.52
	Labour-				
0116	Fitter	Day	2.00	151.50	303.00
0117	Asstt. Fitter	Day	2.00	141.60	283.20
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				1407.08
	Add 1 % for water charges				14.07
	TOTAL				1421.15
	Add 15% for contractor's profit and overheads				213.17
	Cost for 10 joints				1634.32
	Cost for one joint				163.43
	Say				163.45

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.5 250 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
01881	Spun yarn 0.4x10=4 00 kg.	Kilogram	4.00	30.00	120.00
0761	Fuel Wood	quintal	0.65	265.00	172.25
0771	Kerosene oil	litre	1.14	19.00	21.66
9999	Sundries	L.S.	17.55	1.00	17.55
9999	Carriage of materials	L.S.	17.55	1.00	17.55

Code	Description	Unit	Quantity	Rate	Amount
	Labour-				
0116	Fitter	Day	2.50	151.50	378.75
0117	Asstt. Fitter	Day	2.50	141.60	354.00
0114	Beldar	Day	5.00	135.25	676.25
	TOTAL				1758.01
	Add 1% for water charges				17.58
	TOTAL				1775.59
	Add15% for contractor's profit and overheads				266.34
	Cost for 10 joints				2041.93
	Cost for one joint				204.19
	Say				204.20

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.6 300 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.54x10 =5.40 kg	kilogram	5.40	30.00	162.00
0761	Fuel Wood	quintal	0.75	265.00	198.75
0771	Kerosene oil	litre	1.52	19.00	28.88
9999	Sundries	L.S.	20.28	1.00	20.28
9999	Carriage of materials	L.S.	20.28	1.00	20.28
	Labour-				
0116	Fitter	Day	3.00	151.50	454.50
0117	Asstt. Fitter	Day	3.00	141.60	424.80
0114	Beldar	Day	6.00	135.25	811.50
	TOTAL				2120.99
	Add 1 % for water charges				21.21
	TOTAL				2142.20
	Add 15% for contractor's profit and overheads				321.33
	Cost for 10 joints				2463.53
	Cost for one joint				246.35
	Say				246.35

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.7 350 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.62x10=6.20 kg	kilogram	6.20	30.00	186.00
0761	Fuel Wood	quintal	0.93	265.00	246.45
0 771	Kerosene oil	litre	1.70	19.00	32.30
9999	Sundries	L.S.	24.18	1.00	24.18
9999	Carriage of materials	L.S.	24.18	1.00	24.18
	Labour-				
0116	Fitter	Day	3. oo	151.50	454.50
0117	Asstt. Fitter	Day	3.00	141.60	424.80
0114	Beldar	Day	6.00	135.25	811.50
	TOTAL				2 203.91

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				22.04
	TOTAL				2225.95
	Add 15% for contractor's profit and overheads				333.89
	Cost for 10 joints				2559.84
	Cost for one joint				255.98
	Say				256.00

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.8 400 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.74x10=7.40 kg	kilogram	7.40	30.00	222.00
0761	Fuel Wood	quintal	1.12	265.00	296.80
0771	Kerosene oil	litre	1.70	19.00	32.30
9999	Sundries	L.S.	26.91	1.00	26.91
9999	Carriage of materials	L.S.	26.91	1.00	26.91
	Labour-				
0116	Fitter	Day	4.00	151.50	606.60
0117	Asstt. Fitter	Day	4.00	141.60	566.40
0114	Beldar	Day	8.00	135.25	1082.00
	TOTAL				2859.32
	Add 1 % for water charges				28.59
	TOTAL				2887.91
	Add 15% for contractor's profit and overheads				433.19
	Cost for 10 joints				3321.10
	Cost for one joint				332.11
	Say				332.10

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.9 450 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 0.79x10=7.90 kg.	kilogram	7.90	30.00	237.00
0761	Fuel Wood	quintal	1.21	265.00	320.65
0771	Kerosene oil	litre	2.27	19.00	43.13
9999	Sundries	L.S.	31.07	1.00	31.07
9999	Carriage of materials	L.S.	31.07	1.00	31.07
	Labour-				
0116	Fitter	Day	4.50	151.50	681.75
0117	Asstt. Fitter	Day	4.50	141.60	637.20
0114	Beldar	Day	9.00	135.25	1217.25
	TOTAL				3199.12
	Add 1 % for water charges				31.99
	TOTAL				3231.11
	Add 15% for contractor's profit and overheads				484.67
	Cost for 10 joints				3715.78
	Cost for one joint				371.58
	Say				371.60

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.10 500 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials:-				
1881	Sgun yarn 0.85x10=8.50 kg.	Kilogram	8.50	30.00	255.00
0761	Fuel wood	quintal	1.31	265.00	347.15
0771	Kerosene oil	litre	2.27	19.00	43.13
9999	Sundries	L.S.	33.67	1.00	33.67
9999	Carriage of materials	L.S	33.67	1.00	33.67
	Labour-				
0116	Fitter	Day	4.75	151.50	719.62
0117	Asstt. Fitter	Day	4.75	141.60	672.60
0114	Beldar	Day	9.50	135.25	1284.88
	TOTAL				3389.72
	Add 1% for water charges				33.90
	TOTAL				3423.62
	Add 15% for contractor's profit and overheads				513.54
	Cost for 10 joints				3937.16
	Cost for one joint				393.72
	Say				393.70

18.28 Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :

18.28.11 600 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1881	Spun yarn 1.02x10=10.20 kg.	kilogram	10.20	30.00	306.00
0761	Fuel wood	quintal	1.68	265.00	445.20
0771	Kerosene oil	litre	2.84	19.00	53.96
9999	Sundries	L.S.	40.30	1.00	40.30
9999	Carriage of materials	L.S.	40.30	1.00	40.30
	Labour-				
0116	Fitter	Day	6.50	151.50	984.75
0117	Asstt. Fitter	Day	6.50	141.60	920.40
0114	Beldar	Day	13.00	135.25	1 758.25
	TOTAL				4 549.16
	Add 1% for water charges				45.49
	TOTAL				4 594.65
	Add 15% for contractor's profit and overheads				689.20
	Cost for 10 joints				5 283.85
	Cost for one joint				528.39
	Say				528.40

18.29 Supplying pig lead at site of work.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	materials-				
1397	Lead	Kilogram	100.00	58.00	5800.00
2341	Carrigae	tonne	0.10	47.29	4.73
	TOTAL				5804.73
	Add 1% for water charges				58.05
	TOTAL				5862.78
	Add 15% for contractor's profit and overheads				879.42
	Cost of one quintal				6742.20
	Say				6742.20

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :

18.30.1 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1373	Rubber insertion 3mm thick	each	10.00	9.00	90.00
1956	Bolts and nuts 16mm dia, 60 mmlong	each	40.00	8.00	320.00
9999	Carriage of matonal	L.S.	2.73	1.00	2.73
	Labour-				
0116	Fitter	Day	0.15	151.50	22.72
0117	Asstt. Fitter	Day	0.15	141.60	21.24
0114	Beldar	Day	0.80	135.25	108.20
	TOTAL				564.89
	Add 1% for water charges				5.65
	TOTAL				570.54
	Add 15% for contractor's profit and overheads				85.58
	Cost for 10 joints				656.12
	Cost for one joint				65.61
	Say				65.60

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :

18.30.2 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1374	Rubber insertion 3mm thick	each	10.00	12.00	120.00
1956	Bolts and nuts 16mm dia, 60 mm long	each	80.00	8.00	640.00
9999	Carriage of materials	L.S.	4.16	1.00	4.16
	Labour-				
0116	Fitter	Day	0.25	151.50	37.88
0117	Asstt. Fitter	Day	0.25	141.60	35.40
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				972.69
	Add 1% for water charges				9.73
	TOTAL				982.42
	Add 15% for contractor's profit and overheads				147.36
	Cost for 10 joints				1129.78
	Cost for one joint				112.98
	Say				113.00

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :

18.30.3 125 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials:-				
1375	Rubber insertion 3mrn thick	each	10.00	13.00	130.00
1957	Bolts and nuts 16mm dia 65mm long	each	80.00	8.00	640.00
9999	Carriage of materials	L.S.	4.16	2.60	4.16
	Labour-				
0116	Fitter	Day	0.25	151.50	37.88
0117	Asstt. Fitter	Day	0.25	141.60	35.40
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				982.69
	Add 1 % for water charges				9.83
	TOTAL				992.52
	Add 15% for contractor's profit and overheads				148.88
	Cost for 10 joints				1141.40
	Cost for one joint				114.14
	Say				114.15

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints:

18.30.4 150 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1376	Rubber insertion 3mm thick	each	10.00	15.00	150.00
1958	Bolts and nuts 20 mm dia, 65mm long	each	80.00	12.00	960.00
9999	Carriage of material	L.S.	4.16	1.00	4.16
	Labour-				
0116	Fitter	Day	0.30	151.50	45.45
0117	Asstt. Fitter	Day	0.30	141.60	42.48
0114	Beldar	Day	1.10	135.25	148.78
	TOTAL				1 350.87
	Add 1 % for water charges				13.51
	TOTAL				1 364.38
	Add 15% for contractor's profit and overheads				204.66
	Cost for 10 joints				1 569.04
	Cost for one joint				156.90
	Say				156.90

18.30 Providing flanged joints to double flanged C.I./ D.I pipes and specials including testing of joints :

18.30.5 200 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1377	Rubber insertion 3mm thick	each	10.00	20.00	200.00
1959	Bolts and nuts 20mm dia 70mm long	each	80.00	12.00	960.00
9999	Carrage of materials	L.S.	4.16	1.00	4.16
	Labour-				

Code	Description	Unit	Quantity	Rate	Amount
0116	Fitter	Day	0.30	151.50	45.45
0117	Asstt. Fitter	Day	0.30	141.60	42.48
0114	Beldar	Day	1.10	135.25	148.78
	TOTAL				1400.87
	Add 1% for water charges				14.01
	TOTAL				1414.88
	Add 15% for contractor's profit and overheads				212.23
	Cost for 10 joints				1627.11
	Cost for one joint				162.71
	Say				162.70

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints

18.30.6 250 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1378	Rubber insertign 3mm thick	each	10.00	30.00	3000.00
1960	Bolts and nuts 20mm dia 75mm long	each	120.00	12.00	1440.00
	Labour-				
9999	Carriage of material	L.S.	5.33	1.00	5.33
0116	Fitter	Day	0.40	151.50	60.60
0117	Asstt. Fitter	Day	0.40	141.60	56.64
0114	Beldar	Day	1.30	135.25	175.82
	TOTAL				2038.39
	Add 1% for water charges				20.38
	TOTAL				2058.77
	Add 15% for contractor's profit and overheads				308.82
	Cost for 10 joints				2367.59
	Cost for one joint				236.76
	Say				236.75

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :

18.30.7 300 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1379	Rubber insertion 3mm thick	each	10.00	38 00	380.00
1960	Bolts and nuts 20mm dia 75mm long	each	120.00	12.00	144.00
9999	Carnage of materials	L.S.	5.33	1.00	5.33
	Labour-				
0116	Fitter	Day	0.40	151.50	60.60
0117	Asstt. Fitter	Day	0.40	141.60	56.64
0114	Beldar	Day	1.30	135.25	175.82
	TOTAL				2 118.39
	Add 1 % for water charges				21.18
	TOTAL				2 139.57
	Add 15% for contractor's profit and overheads				320.94
	Cost for 10 joints				2 460.51
	Cost for one joint				246.05
	Say				246.05

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints

18.30.8 350 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1380	Rubber insertion 3mm thick	each	10.00	45.00	450.00
1961	Bolts and nuts 20mm dia 80 mmlong	each	160.00	13.00	2080.00
9999	Carriage of materials	L.S.	5.33	1.00	5.33
	Labour-				
0116	Fitter	Day	0.50	151.50	75.75
0117	Asstt. Fitter	Day	0.50	141.60	70.80
0114	Beldar	Day	1.50	135.25	202.88
	TOTAL				2 884.76
	Add 1 % for water charges				28.85
	TOTAL				2 913.61
	Add 15% for contractor's profit and overheads				437.04
	Cost for 10 joints				3 350.65
	Cost for one joint				335.07
	Say				335.05

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints

18.30.9 400 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1381	Rubber insertion 3mm thick	each	10.00	66.00	660.00
1962	Bolts and nuts 24mm dia 85mm long	each	160.00	24.00	3840.00
9999	Carriage of materials	L.S.	8.06	1.00	8.06
	Labour-				
0116	Fitter	Day	0.50	151.50	75.75
0117	Asstt. Fitter	Day	0.50	141.60	70.80
0114	Beldar	Day	1.50	135.25	202.88
	TOTAL				4857.49
	Add 1 % for water charges				48.57
	TOTAL				4906.06
	Add 15% for contractor's profit and overheads				735.91
	Cost for 10 joints				5641.97
	Cost for one joint				564.20
	Say				564.20

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :

18.30.10 450 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1382	Rubber insertion 3mm thick	each	10.00	83.00	830.00
1962	Bolts and nuts 24mm dia 85mm long	each	200.00	24.00	4800.00
9999	Carriage of materials	L.S.	8.06	1.00	8.06
	Labour-				

Code	Description	Unit	Quantity	Rate	Amount
0116	Fitter	Day	0.60	151.50	90.90
0117	Asstt. Fitter	Day	0.60	141.60	84.96
0114	Beldar	Day	1.70	135.25	229.92
	TOTAL				6 043.84
	Add 1 % for water charges				60.44
	TOTAL				6 104.28
	Add 15% for contractor's profit and overheads				915.64
	Cost for 10 joints				7 019.92
	Cost for one joint				701.99
	Say				702.00

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints :

18.30.11 500 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1383	Rubber insertion 3 mm thick	each	10.00	106.00	1060.00
1963	Bolts and nuts 20mm dia 90 mm long	each	200.00	26.00	5200.00
9999	Carriage of materials	L.S.	8.06	1.00	8.06
	Labour-				
0116	Fitter	Day	0.65	151.50	98.48
0117	Asstt. Fitter	Day	0.65	141.60	92.04
0114	Beldar	Day	1.80	135.25	243.45
	TOTAL				6702.03
	Add 1 % for water charges				67.02
	TOTAL				6769.05
	Add 15% for contractor's profit and overheads				1015.36
	Cost for 10 joints				7784.41
	Cost for one joint				778.44
	Say				778.45

18.30 Providing flanged joints to double flanged C.I./ D.I. pipes and specials including testing of joints

18.30.12 600 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 joints				
	Materials :-				
1384	Rubber insertion 3mm thick	each	10.00	118.00	1180.00
1964	Bolds and nuts 20mm dia 100 mm long	each	200.00	30.00	6000.00
9999	Carriage of materials	L.S.	9.49	1.00	9.49
	Labour-				
0116	Fitter	Day	0.75	151.50	113.62
0 117	Asstt. Fitter	Day	0.75	141.60	106.20
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				7679.81
	Add 1% for water charges				76.80
	TOTAL				7756.61
	Add 15% for contractor's profit and overheads				1163.49
	Cost for 10 joints				8 920.10
	Cost for one joint				892.01
	Say				892.00

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.1 100 mm diameter

18.31.1.1 Class I

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
1940	100mm dia. sluice valves (with cap)	each	10.00	1 890.00	18 900.00
	Carriage pf sluice valves				
2309	wt.= 44.3x10=443kg= 0.443t. say 0.44t	tonne	0.44	47.29	20.81
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	4.43	100.25	444.11
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.2	each	20.00	113.00	2 260.00
	TOTAL				21 624.92
	Add for water charges @ 1% on all except 'A'				189.21
	TOTAL				21 814.13
	Add 15% for contractor's profit and overheads on all except 'A'				2 866.50
	Cost of 10 valves				24 680.63
	Cost of 1 valve				2 468.06
	Say				2 468.05

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.1 100 mm diameter

18.31.1.2 Class II

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
3311	100mm dia. sluice.valves (wiith cap)	each	10.00	1950.00	19500.00
	Carriage of sluice valves				
2309	wt.= 56.3x10=563kg = 0.563 t. say 0.56t	tonne	0..56	47.29	26.48
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	5.63	100.25	564.41
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.2)	each	20.00	113.00	2260.00
	TOTAL				22350.89
	Add for water charges @ 1% on all except 'A'				195.26
	TOTAL				22546.15
	Add 15% for contractor's profit and overheads on all except 'A'				2958.26
	Cost of 10 valves				25504.41
	Cost of 1 valve				2550.44
	Say				2550.45

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.2 125 mm diameter

18.31.2.1 Class I

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
1941	125mm dia. sluice valves (with cap)	each	10.00	2365.00	23650.00
	Carriage of sluice valves				
2309	wt. = 56.3x10= 563kg = 0.563t.say 0.56t	tonne	0.56	47.29	26.48
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	5.63	100.25	564.41
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.3)	each	20.00	114.15	2283.00
	TOTAL				26523.89
	Add for water charges @ 1% on all except 'A'				236.76
	TOTAL				26760.65
	Add 15% for contractor's profit and overheads on all except 'A'				3586.99
	Cost of 10 valves				30347.64
	Cost of 1 valve				3034.76
	Say				3034.75

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.2 125 mm diameter

18.31.2.2 Class II

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials:-				
3314	125mm dia. sluice valves (with cap)	each	10.00	2465.00	24650.00
2309	Carriage of sluice valve				
	wt.= 68.3x10 = 683 kg = 0.638 t say o.68 tonne	tonne	0.68	47.29	32.16
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	6.83	100.25	684.71
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.3)	each	20.00	114.15	2283.00
	TOTAL				27649.87
	Add for water charges @ 1% on all except 'A'				246.82
	TOTAL				27896.69
	Add l5% for contractor's profit and overheads on all except 'A'				3739.35
	Cost of 10 valves				31636.04
	Cost of 1 valve				3163.60
	Say				3163.60

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.3 150 mm diameter

18.31.3.1 Class I

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
1942	150mm dia sluice valves (with cap)	each	10.00	2840.00	28400.00
	Carriage of sluice valves				
2309	wt. =72.5x10=725kg=0.725t.say 0.72t	tonne	0.72	47.29	34.05
	Labour for laying sluice valve				
(A)	(Rate as per item No.18.24)	quintal	7.25	100.25	726.81
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No 18.30.4)	each	20.00	156.90	3138.00
	TOTAL				32298.86
	Add for water charges @ 1% on all except 'B'				284.34
	TOTAL				32583.20
	Add 15% for contractor's profit and overheads on all except 'B'				4307.76
	Cost of 10 valves				36890.96
	Cost of 1 valve				3689.10
	Say				3689.10

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.3 150 mm diameter

18.31.3.2 Class II

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
3317	150mm dia. sluice valves (with cap)	each	10.00	3 000.00	30 000.00
	Carriage of sluice valves				
2309	wt.= 86.5x10=865kg =0.865t. say 0.865t	tonne	0.865	47.29	40.91
	Labour for laying sluice valve				
(A)	(Rate as per item No.18.24)	quintal	8.65	100.25	867.16
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.4)	each	20.00	156.90	3 138.00
	TOTAL				34 046.07
	Add for water charges @ 1% on all except 'A'				300.41
	TOTAL				34 346.48
	Add 15% for contractor's profit and overheads on all except 'A'				4 551.20
	Cost of 10 valves				38 897.68
	Cost of 1 valve				3 889.77
	Say				3 889.75

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.4 200 mm diameter

18.31.4.1 Class I

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
1943	200mm dia,sluice valves (with cap)	each	10.00	5405.00	54050.00
	Carriage of sluice valves				
2309	wt.= 121.5x10=1215kg= 1.215t. say 1.22t	tonne	1.22	47.29	57.69
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	12.15	100.25	1218.04
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.5)	each	20.00	162.70	3254.00
	TOTAL				58579.73
	Add for water charges @ 1% on all except 'A'				541.08
	TOTAL				59120.81
	Add 15% for contractor's profit and overheads on all except 'A'				8197.32
	Cost of 10 valves				67318.13
	Cost of 1 valve				6731.81
	Say				6731.80

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.4 200 mm diameter

18.31.4.2 Class II

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
3320	200mm dia. sluice .valves (with cap)	each	10.00	5 800.00	58 000.00
	Carriage of sluice valves				
2309	wt.= 150.5x10=1505kg=1.505t. say 1.5t	tonne	1.50	47.29	70.94
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	15.05	100.25	1 508.76
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.5)	each	20.00	162.70	3 254.00
	TOTAL				62 833.70
	Add for water charges @ 1% on all except 'A'				580.71
	TOTAL				63 414.41
	Add 15% for contractor's profit and overheads on all except 'A'				8 797.75
	Cost of 10 valves				72 212.16
	Cost of 1 valve				7 221.22
	Say				7 221.20

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.5 250 mm diameter

18.31.5.1 Class I

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
1944	250mm dia. sluice valves (with cap)	each	10.00	8050.00	80500.00
	Carriage of sluice valves				
2309	wt.= 179.9x10=1799kg= 1.799t. say 1.80t	tonne	1.80	47.29	85.12
	Labour for laying sluice valve				
(A)	(Rate as per item No.18.24)	quintal	17.99	100.25	1803.50
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.6)	each	20.00	236.75	4735.00
	TOTAL				87123.62
	Add for water charges @ 1% on all except 'A'				805.85
	TOTAL				87929.47
	Add 15% for contractor's profit and overheads on all except 'A'				12208.65
	Cost of 10 valves				100138.12
	Cost of 1 valve				10013.81
	Say				10013.80

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.5 250 mm diameter

18.31.5.2 Class II

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
3321	250mm dia. sluice valves (with cap)	each	10.00	8 200.00	82 000.00
	Carriage of sluice valves				
2309	wt. =229.9x10=2299kg =2299t. say 2.30t	tonne	2.30	47.29	108.77
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	22.99	100.25	2 304.75
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.6)	each	20.00	236.75	4 735.00
	TOTAL				89 148.52
	Add for water charges @ 1% on all except 'A'				821.09
	TOTAL				89 969.61
	Add 15% for contractor's profit and overheads on all except 'A'				12 439.48
	Cost of 10 valves				102 409.09
	Cost of 1 valve				10 240.91
	Say				10 240.90

8.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.6 300 mm diameter

18.31.6.1 Class 1

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
1945	300mm dia sluice valves (with cap)	each	10.00	9920.00	99200.00
	Carriage of sluice valves				
2309	wt.= 242.4x10=2424kg = 2.42t. say 2.42t	tonne	2.42	47.29	114.44
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	24.24	100.25	2430.06
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.7)	each	20.00	246.05	4921.00
	TOTAL				106665.50
	Add for water charges @ I % on all except 'A'				993.14
	TOTAL				107658.64
	Add 15% for contractor's profit and overheads on all except 'A'				15046.14
	Cost of 10 valves				122704.78
	Cost of 1 valve				12270.48
	Say				12270.50

18.31 Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately):

18.31.6 300 mm diameter

18.31.6.2 Class II

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sluice valves				
	Materials :-				
3326	300mm dia. sluice, valves (with cap)	each	10.00	10 250.00	102 500.00
	Carriage of sluice valves				
2309	wt.= 303.4x10=3034kg=3.304t.	tonne	3.034	47.29	143.48
	Labour for laying sluice valve				
(A)	(Rate as per item No. 18.24)	quintal	30.34	100.25	3 041.58
	Providing flanged joints to sluice valves with bolts, nuts and rubber insertion etc.				
(A)	(Rate as per item No.18.30.7)	each	20.00	246.05	4 921.00
	TOTAL				110 606.06
	Add for water charges @ 1% on all except 'A'				1 026.43
	TOTAL				111 632.49
	Add 15% for contractor's profit and overheads on all except 'A'				15 550.49
	Cost of 10 valves				127 182.98
	Cost of 1 valve				12 718.30
	Say				12 718.30

18.32 Constructing masonry Chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement :5 fine sand:10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12mm thick finished with a floating coat of neat cement complete as per standard design :

18.32.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Materials :-				
	(i) Earth work in excavation including refilling and disposal of surplus earth				
	0.68x0.68x0.65m=0.301cum.				
	(Rate as per item No. 2.8.1)	cum	0.30	103.40	31.02
	(Rate as per item No. 2.25)	cum	0.30	45.70	13.71
	(ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
	0.68x0.68x0.075m=0.035cum. Say 0.04 cum.				
	(Rate as per item No.4.1.11)	cum	0.04	2 079.60	83.18
	(iii) Second class brick work in cement mortar 1:4 (1 Cement: 4 coarse sand) in foundations and plinth				
	1.66mx0.115x0.50m=0.095cum. Say 0.10 cum.				
	(Rate as per item no 6.1.1 of SH : Brick Work)	cum	0.10	2 293.40	229.34
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				
	1.20x0.50=0.60sqm.				
	0.30x0.30=0.09sqm.				
	=0.69sqm. Say 0.70sqm.				
	(Rate as per item no .13.9.1)	sqm	0.70	112.80	78.96
1304	**(A)** (v) C.I. surface box with hinged cover 100x100x75mm (inside)	each	1.00	72.00	72.00
9999	**(A)** (vi) Carriage of C.I. surface box	L.S.	1.43	1.00	1.43
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size)				
	in slab = 0.53mx0.53mx0.075m = 0.02107cum.				
	Less surface box 0.112x0.112x0.076				
	=(-)0.00094 cum.				
	= 0.0201 cum. Say 0.02cum.				
	(Rate as per item No.5.3)	cum	0.02	3 673.85	73.48
(A)	(viii) Sundries	L.S.	4.16	1.00	4.16
	TOTAL				587.28
(B)	Add for water charges @ 1 % on ‘A				0.78
	TOTAL				588.06
	Add 15% for contractor’s profit and overheads on (A + B)				11.76
	Cost of one chamber				599.82
	Say				599.80

18.33 Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement :4coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation7foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :

18.33.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Materials :-				
	(i) Earth work in excavation including refilling and disposal of surplus earth				
	1.21 x 1.21 x 1.00m= 1.464cum.				
	(Rate as per item No. 2.8.1)	cum	1.46	103.40	150.96
	(Rate as per item No.2.25)	cum	1.46	45.70	66.72
	(ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
	1.21xl.21x0.1m=0.146cum. Say 0.15 cum.				
	(Rate as per item No.4.1.11)	cum	0.15	2 079.60	311.94
	(iii) Second class brick work in cement mortar 1: 4(1 Cement: 4coarse sand) in foundations and plinth				
	3.32mx0.23mx0.75m=0.573cum. Say 0.57 cum.				
	(Rate as per item no 6.1.1)	cum	0.57	2 293.40	1 307.24
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				
	2.40x0.75=1.80sqm				
	0.60x0.60=0.36sqm.				
	=2.16sqm.				
	(Rate as per item no. 13.9.1)	sqm	2.16	112.80	243.65
1305	**(A)** (v) C.I. surface box with hinged cover 100x100x75mm (inside)	each	1.00	140.00	140.00
9999	**(A)** (vi) Carriage of C.I. surface box	L.S.	8.06	1.00	8.06
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size)				
	in slab = 1.06mx1.06mx0.15m = 0.1685 cum.				
	Less surface box $3.142/4xd^2xO.$ 18m - 0.7854x0.156mx0.156mx0.18 = (-)0.0034 cum = 0.1651 cum. Say 0.17 cum.				
	(Rate as per item No.5.3)	cum	0.17	3 673.85	624.55
	(viii) Mild steel reinforcement for RCC work etc.				
	0.165cum.x80kg/cum. = 13.2kg.				
	(Rate as per item No.5.22.1	kg	13.20	41.50	547.80
	(ix) Form work 0.60mx0.60m=0.36sqm.+ 3.32mx0.15m=0.50sqm.				
	= 0.86 sqm.				
	(Rate as per item No.5.9.3)	sqm	0.86	187.35	161.12
9999	(A) (x) Sundries	L.S.	8.06	1.00	8.06
	TOTAL				3 570.10
	(B) Add for water charges @ 1 % on (A)				1.56
	TOTAL				3 571.66
	Add 1 15% for contractor's profit and overheads on (A+B)				23.65
	Cost of one chamber				3 595.31
	Say				3 595.30

18.34: Constructing masonry Chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4(1 cement: 4 corase sand) for sluice valve, with C.I. surface box 100 mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement: 2 coarse sand : 4"graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement: 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3(1 cement: 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :

18.34.1: With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Materials :-				
	(i) Earth work in excavation including refilling and disposal of surplus earth				
	1.51X1.51X1.25M				
	(Rate as per item No. 2.8.1)	cum	2.85	103.40	294.69
	(Rate as per item No.2.25	cum	2.85	45.70	130.24
	(ii) Cement concrete 1:5:10(1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
	1.51x1.51x0.lm=0.228cum. Say 0.23 cum.				
	(Rate as per item No.4.1.11)	cum	0.23	2 079.60	478.31
	(iii) Second class brick work in cement mortar 1:4 (1 Cement: 4coarse sand) in foundations and plinth				
	4.52mxO.23mx 1.00m= 1.04cum.				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	1.04	2 293.40	2 385.14
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				
	3.60mxl.00m=3.60sqm.				
	0.90mx0.90m=0.81sqm.				
	=4.41 sqm.				
	(Rate as per item no. 13.9.1)	sqm	4.41	112.80	497.45
1305	**(A)** (v) C.I. surface box with chained lid.	each	1.00	140.00	140.00
9999	**(A)** (vi) Carriage of C.I. surface box	L.S.	8.06	1.00	8.06
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size)				
	in slab = 1.36mx 1.36mx0.15m = 0.2774 cum.				
	Less surface box				
	0.7854x0.156mxO. 156mx0.18m = (-)0.0034 cum.				
	= 0.2740 cum. Say 0.27 cum.				
	(Rate as per item No.5.3)	cum	0.27	3 673.85	991.94
	(viii) Mild steel reinforcement for RCC work etc.				
	0.274cum.x80kg/cum. = 21.92 kg.				
	(Rate as per item No.5.22.1)	kg	21.92	41.50	909.68
	(ix) Form work 0.90mx0.90m=0.81sqm.+ 4.52mxO.15m = 0.68 sqm.				
	= 1.49 sqm.				
	(Rate as per item No.5.9.3)	sqm	1.49	187.35	279.15
9999	**(A)** (x) Sundries	L.S.	8.06	1.00	8.06
	TOTAL				6 122.72
(B)	Add for water charges @ 1 % on (A)				1.56
	TOTAL				6 124.28
	Add 15% for contractor's profit and overheads on (A+B)				23.65
	Cost of one manhole				6 147.93
	Say				6 147.95

18.35 : Constructing masonry Chamber 120x120x100 cm, inside with 75 class designation brick work in cement mortar 1:4(cement :4 coarse) for sluice valve, with C.I. surface box 100 mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10(1 cement : 5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :

18.35.1: With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Materials :-				
	(i) Earth work in excavation including refilling and disposal of surplus earth 1.81X1.81X1.25M				
	(Rate as per item No. 2.8.1)	cum	4.10	103.40	423.94
	(Rate as per item No 2.25)	cum	4.10	45.70	187.37
	(ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
	1.81xl.81x0.1m=0.328cum. Say 0.33 cum.				
	(Rate as per item No.4.1.11)	cum	0.33	2 079.60	686.27
	(iii) Second class brick work in cement mortar 1:4 (1 Cement: 4coarse sand) in foundations and plinth				
	5.72mx0.23mxl.00m=1.316cum. Say 1.32 cum.				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	1.32	2293.40	3027.29
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				
	4.80mxl.00m=4.80sqm.				
	1.20mxl.20m=1.44sqm. =6.42sqm.				
	(Rate as per item no. 13.9.1)	sqm	6.42	112.80	724.18
1305	**(A)** (v) C.I. surface box with chained lid.	each	1.00	140.00	140.00
9999	**(A)** (vi) Carriage of C.I. surface box	L.S.	8.06	1.00	8.06
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size)				
	in slab = 1.66mx 1.66mxO. 15m = 0.4133 cum.				
	Less surface box				
	0.7854x0.156mx0.156mxO. 18m = (-)0.0034 cum.				
	= 0.4099 cum. Say 0.41 cum.				
	(Rate as per item No.5.3)	cum	0.41	3 673.85	1506.28
	(viii) Mild steel reinforcement for RCC slab steel @ 80kg/cum.				
	0.41cum.x80kg/cum. = 32.80kg.				
	(Rate as per item No.5.22.1)	kg	32.80	41.50	1361.20
	(ix) Form work 1.20mxl.20m=1.44sqm.+ 5.72mx0.15m=0.86sqm.				
	= 2.30sqm.				
	187.35				
	(Rate as per item No.5.9.3)	sqm	2.30	187.35	430.90
9999	**(A)** (x) Sundries	sqm	8.06	1.00	8.06
	TOTAL				8503.55
(B)	Add for water charges @ 1% on (A)				1.56
	TOTAL				8505.11
	Add 15% for contractor's profit and overheads on(A+B)				23.65
	Cost of one manhole				8528.76
	Say				8528.75

18.36 : Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work in cement mortar 1:4(1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm. top and 165 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement: 5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement: 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :

18.36.1: With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Materials :-				
	(i) Earth work in excavation including refilling and disposal of surplus earth				
	1.21X1.21X1.00M =1.464 cum say 1.46cum				
	(Rate as per item No. 2.8.1)	cum	1.46	103.40	150.96
	(Rate as per item No.2.25)	cum	1.46	45.70	66.72
	(ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
	1.21xl.21x0.1m=0.146cum. Say 0.15 cum.				
	(Rate as per item No.4.1.11)	cum	0.15	2 079.60	311.94
	(iii) Second class brick work in cement mortar 1:4 (1 Cement: 4 coarse sand) in foundations and plinth				
	3.32mx0.23mx0.75m=0.573cum. Say 0.57 cum.				
	(Rate as per item no 6.1.1)	cum	0.57	2 293.40	1 307.24
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				
	2.40mx0.75m=1.80sqm.				
	0.90mx0.90m=0.36sqm.				
	=2.16sqm.				
	(Rate as per item no. 13.9.1)	sqm	2.16	112.80	243.65
1305	**(A)** (v) C.I. surface box with chained lid.	each	1.00	140.00	140.00
9999	**(A)** (vi) Carriage of C.I. surface box	L.S.	53.82	1.00	53.82
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20mm nominal size)				
	in slab = 1.06mxl.06mx0.15m = 0.1685 cum.				
	Less surface box 0.61x0.41mx0.15m= (-)0.0375 cum.				
	= 0.131 cum. Say 0.13 cum.				
	(Rate as per item No.5.3)	cum	0.13	3 673.85	477.60
	(viii) Mild steel reinforcement for RCC work etc.				
	0.131cumx80kg/cum. = 10.48kg.				
	(Rate as per item No.5.22.1)	kg	10.48	41.50	434.92
	(ix) Form work 0.60mx0.60m=0.36sqm.+ 3.32mxO.15m = 0.50 sqm.				
	=0.86 sqm.				
	(Rate as per item No.5.9.3)	sqm	0.86	187.35	161.12
9999	**(A)** (x) Sundries	L.S.	8.06	1.00	8.06
	TOTAL				3 356.03
(B)	Add for water charges @ 1% on (A)				2.02
	TOTAL				3 358.05
	Add 15% for contractor's profit and overheads on (A+B)				30.58
	Cost of one manhole				3 388.63
	Say				3 388.65

18.37 : Constructing masonry Chamber 60x45x50 cm, inside with 75 class designation brick work in cement mortar 1:4(1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement: 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement: 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :

18.37.1: With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber.				
	Materials:-				
	(i) Earth work in excavation including refilling and disposal of surplus earth				
	1.21X1.06X0.85m = 1.09 cum				
	(Rate as per item No. 2.8.1)	cum	1.09	103.40	112.71
	(Rate as per item No.2.25	cum	1.09	45.70	49.81
	(ii) Cement concrete 1:5:10 (1 Cement: 5 fine sand : 10 graded stone aggregate 40mm nominal size)				
	1.21 x 1.06x0. lm=0.128cum. Say 0.13 cum.				
	(Rate as per item No.4.1.11)	cum	0.13	2079.60	270.35
	(iii) Second class brick work in cement mortar 1:4 (1 Cement: 4 coarse sand) in foundations and plinth				
	3.02mx0.23mx0.50m=0.347cum. Say 0.35 cum.				
	(Rate as per item no 6.1.1 of SH : Brick Work)	cum	0.35	2293.40	802.69
	(iv) 12mm cement plaster 1:3 (1 Cement: 3 Coarse sand) finished with a floating coat of neat cement.				
	2.10mx0.50m=l .05sqm.				
	0.60mx0.45m=0.27sqm.				
	= 1.32sqm. (Rate as per item no.13.9.1)	sqm	1.32	112.80	148.90
1307	**(A)** (v) C.I. surface box 400x200x200mm (inside) with locking arrangement	each	1.00	185.00	185.00
9999	**(A)** (vi) Carriage of C.I. surface box	L.S.	13.52	1.00	13.52
	(vii) Cement concrete 1:2:4 (1 Cement: 2 Coarse sand ; 4 graded stone aggregate 20 mmnominal size)				
	in slab = 1.06mx0.91mx0.25m = 0.241 cum.				
	Less surface box 0.42x0.22mx0.2m= (-)0.018 cum = 0.223 cum. Say 0.22 cum.				
	(Rate as per item No.5.3)	cum	0.22	3673.85	808.25
	(viii) Mild steel reinforcement for RCC work steel @ 80kg/cum.				
	0.223 cum.x80kg/cum. = 17.84 kg.				
	(Rate as per item No.5.22.1)	Kg	17.84	41.50	740.36
	(ix) Form work 0.60mx0.45m=0.27sqm.+ 3.02mx0.25m=0.76sqm.				
	= 1.03sqm. (Rate as per item No. 5.9.3)	sqm	1.03	187.35	192.97
	(A) (x) Sundries	L.S	8.06	1.00	8.06
	TOTAL				3332.62
(B)	Add for water charges @ 1 % on (A)				2.07
	TOTAL				3334.69
	Add 15% for contractor's profit and overheads on(A+B)				31.30
	Cost of one manhole				3365.99
	Say				3366.00

18.38 : Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :

18.38.1: 15 mm diameter pipe. -—

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Perimeter = 0.0673 metre Area10x0.0673rn = 0.673sqm. Priming Coat				
	Rate as per item No. 13.50.3 of SH: Finishing)	sqm	0.673	12.65	8.51
	Painting two coats excluding priming coat with white paint on new work.				
	(Rate as per item No. 13.61.1)	sqm	0.673	35.35	23.79
9999	**(A)** Add for delay	L.S.	13.52	1.00	13.52
	TOTAL				45.82
(B)	Add for water charges @ 1 % on (A)				0.14
	TOTAL				45.96
	Add 15% for contractor's profit and overheads on (A+B)				2.05
	Cost of 10 metre				48.01
	Cost of one metre				4.80
	Say				4.80

18.38 : Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :

18.38.2: 20 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Perimeter = 0.0845 metre Area = 10x0.0845 sqm. = 0.845 sqm. Priming Coat				
	(Rate as per item No. 13.50.3 of SH Finishing)	sqm	0.845	12.65	10.69
	Painting two coats excluding priming coat with white paint on new work.				
	(Rate as per item No.l3.61.1)	sqm	0.845	35.35	29.87
9999	**(A)** Add for delay	L.S.	13.52	1.00	13.52
	TOTAL				54.08
(B)	Add for water charges @ 1 % on (A)				0.14
	TOTAL				54.22
	Add 15% for contractor's profit and overheads on (A+B)				2.05
	Cost of 10 metre				56.27
	Cost of one metre				5.63
	Say				5.65

18.38: Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :

18.38.3 : 25 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Perimeter = 0.1061 metre Area= 10x0.1061 sqm. = 1.061 sqm Priming coat				

Code	Description	Unit	Quantity	Rate	Amount
	(Rate as per item No. 13.50.3) Painting two coats excluding priming coat with white paint on new work.	sqm	1.061	12.65	13.42
	(Rate as per item No. 13.6I.1 of S.H. finishing)	sqm	1.061	35.35	37.51
9999	(A) Add for delay	L.S.	20.28	1.00	20.28
	TOTAL				71.21
(B)	Add for water charges @ 1 % on (A)				0.20
	TOTAL				71.41
	Add l5% for contractor's profit and overheads on (A+B)				3.07
	Cost of 10 metre				74.48
	Cost of one metre				7.45
	Say				7.45

18.38 : Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :

18.38.4: 32 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Perimeter = 0.1334 metre Area = 10x0.1334 sqm. = 1.334 sqm. Priming Coat				
	Rate as per item No.13.50.3 of SH : Finishing) Painting two coats excluding priming coat with white paint on new work.	sqm	1.334	12.65	16.88
	(Rate as per item No.13.61.l of S.H. finishing)	sqm	1.334	35.35	47.16
9999	**(A)** Add for delay	L.S.	20.28	1.00	20.28
	TOTAL				84.32
(B)	Add for water charges @ 1% on (A)				0.20
	TOTAL				84.52
	Add 15% for contractor's profit and overheads on(A+B)				3.07
	Cost of 10 metre				87.59
	Cost of one metre				8.76
	Say				8.75

18.38: Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :

18.38.5: 40 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Perimeter = 0.1520 metre Area = 10x0.1520 sqm.= 1.520 sqm. Priming Coat				
	(Rate as per item No.l3.50.3 of SH : Finishing) Painting two coats excluding priming coat with white paint on new work.	sqm	1.52	12.65	19.23
	(Rate as per item No.l3..61.1 of S.H. finishing)	sqm	1.52	35.35	53.73

Code	Description	Unit	Quantity	Rate	Amount
9999	**(A)** Add for delay	L.S.	26.91	1.00	26.91
	TOTAL				99.87
(B)	Add for water charges @ 1 % on (A)				0.27
	TOTAL				100.14
	Add 15% for contractor's profit and overheads on (A+B)				4.08
	Cost of 10 metre				104.22
	Cost of one metre				10.42
	Say				10.40

18.38: Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :

18.38.6: 50 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Perimeter = 0.1894 metre				
	Area= 10x0.1894 sqm. = 1.894 sqm.				
	Priming Coat				
	(Rate as per item No. 13.50.3 of SH : Finishing)	sqm	1.894	12.65	23.96
	Painting two coats excluding priming coat with white paint on new work.				
	(Rate as per item No.l3.61.l of S.H. finishing)	sqm	1.894	35.35	66.95
9999	**(A)** Add for delay	L.S.	26.91	1.00	26.91
	TOTAL				117.82
(B)	Add for water charges @ 1 % on (A)				0.27
	TOTAL				118.09
	Add 15% for contractor's profit and overheads on (A+B)				4.08
	Cost of 10 metre				122.17
	Cost of one metre				12.22
	Say				12.20

18.39 : Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :

18.39.1: 15 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting one coat with white paint on old work.				
	(Rate as per item No. 14.54.1)	sqm	0.673	22.85	15.38
9999	**(A)** Add for delay	L.S.	8.06	1.00	8.06
	TOTAL				0.08
(B)	Add for water charges @ 1% on (A)				23.52
	TOTAL				1.22
	Add 15% for contractor's profit and overheads on (A+B)				
	Cost of 10 metre				24.74
	Cost of one metre				2.47
	Say				2.45

18.39 : Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :

18.39.2: 20 mm diameter pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting one coat with white paint on old work.				
	(Rate as per item No.14.54.1 of S.H.Repair to Bldg)	sqm	0.845	22.85	19.31
9999	**(A)** Add for delay	L.S.	8.06	1.00	8.06
	TOTAL				27.37
(B)	Add for water charges @ 1 % on (A)				0.08
	TOTAL				27.45
	Add 1 5% for contractor's profit and overheads on (A+B)				1.22
	Cost of 10 metre				28.67
	Cost of one metre				2.87
	Say				2.85

18.39 Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :

18.39.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting one coat with white paint on old Works				
	(Rate as per item No.14.54.1 of S.H.Repair to Bldg)	sqm	1.061	22.85	24.24
9999	**(A)** Add for delay	L.S.	10.79	1.00	10.79
	TOTAL				35.03
(B)	Add for water charges @ 1 % on (A)				0.11
	TOTAL				35.14
	Add 15% for contractor's profit and overheads on (A+B)				1.64
	Cost of 10 metre				36.78
	Cost of one metre				3.68
	Say				3.70

18.39 : Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :

18.39.4 : 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting one coat with white paint on old work.				
	(Rate as per item No. 14.54.1 of S.H.Repair to Bldg)	sqm	1.334	22.85	30.48
9999	**(A)** Add for delay	L.S.	10.92	1.00	10.92
	TOTAL				41.40
(B)	Add for water charges @ 1 % on (A)				0.11
	TOTAL				41.51
	Add 15% for contractor's profit and overheads on (A+B)				1.65
	Cost of 10 metre				43.16
	Cost of one metre				4.32
	Say				4.30

18.39 : Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :

18.39.5: 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting one coat with white paint on old work.				
	(Rate as per item No. 14.54.1 of S.H. Repair to.Bldg)	sqm	1.52	22.85	34.73
9999	**(A)** Add for delay	L.S.	13.52	1.00	13.52
	TOTAL				48.25
(B)	Add for water charges @ 1 % on (A)				0.14
	TOTAL				48.39
	Add 15% for contractor's profit and overheads on (A+B)				2.05
	Cost of 10 metre				50.44
	Cost of one metre				5.04
	Say				5.05

18.39 : Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :

18.39.6 : 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting one coat with white paint on old work.				
	(Rate as per item No.14.54.1 of S.H. Repair to.Bldg)	sqm	1.894	22.85	43.28
9999	**(A)** Add for delay	L.S.	13.52	1.00	13.52
	TOTAL				56.80
(B)	Add for water charges @ 1 % on (A)				0.14
	TOTAL				56.94
	Add 15% for contractor's profit and overheads on (A+B)				2.05
	Cost of 10 metre				58.99
	Cost of one metre				5.90
	Say				5.90

18.40 : Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :

18.40.1: 15 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats.				
	(Rate as per item13.65.1 sub-head finishing)	sqm	0.673	24.80	16.69
9999	**(A)** Add for delay	L.S.	8.06	1.00	8.06
	TOTAL				24.75
(B)	Add for water charges @ 1 % on (A)				0.08
	TOTAL				24.83
	Add 15% for contractor's profit and overheads on (A+B)				1.22
	Cost of 10 metre				26.05
	Cost of one metre				2.61
	Say				2.60

18.40 : Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality

18.40.2: 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No. 13.65.1 sub-head finishing)	sqm	0.845	24.80	20.96
9999	**(A)** Add for delay	L.S.	8.06	1.00	8.06
	TOTAL				29.02
(B)	Add for water charges @ 1% on (A)				0.08
	TOTAL				29.10
	Add 15% for contractor's profit and overheads on (A+B)				1.22
	Cost of 10 metre				30.32
	Cost of one metre				3.03
	Say				3.05

18.40: Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality

18.40.3: 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No.13.65.1 sub-head finishing)	sqm	1.061	24.80	23.31
9999	**(A)** Add for delay	L.S.	10.79	1.00	10.79
	TOTAL				37.10
(B)	Add for water charges @ 1% on (A)				0.11
	TOTAL				37.21
	Add 15% for contractor's profit and overheads on (A+B)				1.64
	Cost of 10 metre				38.85
	Cost of one metre				3.89
	Say				3.90

18.40 : Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :

18.40.4: 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No. 13.65.1 sub-head finishing)	sqm	1.334	24.80	33.08
9999	**(A)** Add for delay	L.S.	10.79	1.00	10.79
	TOTAL				49.87
(B)	Add for water charges @ 1 % on (A)				0.11
	TOTAL				43.98
	Add 15% for contractor's profit and overheads on (A+B)				1.64
	Cost of 10 metre				45.62
	Cost of one metre				4.56
	Say				4.55

18.40 : Painting G.I. pipes and fittings with two coats of anti -corrosive bitumastic paint of approved quality:

18.40.5: 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No. 13.65.1 sub-heads finishing)	sqm	1.52	24.80	37.70
9999	**(A)** Add for delay	L.S.	12.22	1.00	12.22
	TOTAL				49.92
(B)	Add for water charges @ 1 % on (A)				0.12
	TOTAL				50.04
	Add 15% for contractor's profit and overheads on (A+B)				1.85
	Cost of 10 metre				51.89
	Cost of one metre				5.19
	Say				5.20

18.40: Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :

18.40.6 : 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No. 13.65.1 sub-heads finishing)	sqm	1.894	24.80	46.97
9999	**(A)** Add for delay	L.S.	12.22	1.00	12.22
	TOTAL				59.19
(B)	Add for water charges @ 1 % on (A)				0.12
	TOTAL				59.31
	Add 15% for contractor's profit and overheads on (A+B)				1.85
	Cost of 10 metre				61.16
	Cost of one metre				6.12
	Say				6.10

18.40 : Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :

18.40.7 : 65 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No. 13.65.1 sub-heads finishing)	sqm	2.387	24.80	59.20
9999	**(A)** Add for delay	L.S.	13.52	1.00	13.52
	TOTAL				72.72
(B)	Add for water charges @ 1 % on (A)				0.14
	TOTAL				72.86
	Add 15% for contractor's profit and overheads on (A+B)				2.05
	Cost of 10 metre				74.91
	Cost of one metre				7.49
	Say				7.50

18.40 : Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :

18.40.8: 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Painting with anti-corrosive paint two coats. (Rate as per item No. 13.65.1 sub-heads finishing)	sqm	2.796	24.80	69.34
9999	**(A)** Add for delay	L.S.	14.82	1.00	14.82
	TOTAL				84.16
(B)	Add for water charges @ 1 % on (A)				0.15
	TOTAL				84.31
	Add 15% for contractor's profit and overheads on (A+B)				2.25
	Cost of 10 metre				86.56
	Cost of one metre				8.66
	Say				8.65

18.41 : Providing and filling sand grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.1: 15mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum sand				
	Materials				
6501	Fine sand	cum	1.00	175.00	175.00
2335	Carriage of sand	cum	1.00	53.21	53.21
	Labour				
0114	Belders	Day	0.09	135.25	12.17
0115	Coolies	Day	0.11	135.25	14.88
	Total				255.26
	Add for water charges @1%				2.55
	Total				257.81
	Add for contractor profit and overhead @15%				38.61
(A)	Cost for 1cum				296.48
	Details of cost of sand filling alround 15mm dia. pipe 10 metre long.				
	Width of sand filling = 300mm				
	Depth of sand filling under the pipe=75mm+				
	Above the pipe = 150mm+				
	Max. external dia of pipe = 21.8mm				
	= 246.8mm say 247mm				
	Quantity of sand = 10x0.30x0.247 = 0.744' cum.				
	Less for pipe = $3.142/4(0.0218)^2$x10 = (-)0.004 cum				
	= 0.74 cum.				
	Cost of sand filling for 10 metre pipe				
	Rate as in Item No 18.41.1 marked (A)	cum	0.74	296.48	219.40
	TOTAL				219.40
	Cost of 10 metre				219.40
	Cost of one metre				21.94
	Say				21.95

18.41: Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.2: 20 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 20mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 27.3mm = 252.3 Say 252mm Quantity of sand = 10x0.30x0.252 = 0.756 cum. Less for pipe =3.142/4(0.0273)^2 x10 = (-)0.006cum. = 0.750 cum Cost of sand filling for 10 metre pipe Rate as in Item No.18.41.1.marked (A) TOTAL Cost of 10 metre Cost of one metre Say	cum	0.75	296.48	222.36 222.36 222.36 22.24 22.25

18.41 Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.3 25 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 25mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm Above the pipe = 150mm Max. external dia of pipe = 34.2mm = 259.2 Say 259mm Quantity of sand = 10x0.30x0.259 = 0.777 cum. Less for pipe 3.142/4 (0.0342)^2 x 10 = (-)0.009cum. = 0.768 Say 0.77 cum. Cost of sand filling for 10 metre pipe Rate as in Item No 18.41.1 marked (A) TOTAL Cost of 10 metre Cost of one metre Say	cum	0.77	296.48	228.29 228.29 228.29 22.83 22.85

18.41 ; Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.4: 32 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 32mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 42.9mm				

Code	Description	Unit	Quantity	Rate	Amount
	= 267.9 Say 268mm Quantity of sand =0x0.30x0.268 =0.804 cum Less for pipe 3.142/4(0.0429)^{2}x 10 = (-)0.014cum. = 0.790 Say 0.79 cum. Cost of sand filling for 10 metre pipe Rate as in Item No 18.41.1 marked (A) TOTAL Cost of 10 metre Cost of one metre Say	cum	0.79	296.48	234.22 234.22 234.22 23.42 23.40

18.41: Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.5: 40 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 40mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 48.8mm = 273.8 Say 274mm Quantity of sand = 10x0.30x0.274 = 0.82cum Less for pipe 3.142/4(0.0488)^{2}x10 (-)0.014cum. = 0.801 Say 0.80 cum.' Cost of sand filling for 10 metre pipe Rate as in Item No 18.41.1 marked (A) TOTAL Cost of 10 metre Cost of one metre Say	cum	0.80	296.48	237.18 237.18 237.18 23.72 23.70

18.41: Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.6: 50 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 50mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe =150mm+ Max. external dia of pipe = 60.8mm = 285.8 Say 286mm Quantity of sand =10x0.30x0.286 =0.858 cum Less for pipe 3.142/4(0.0608)^{2}xl0 = (-)0.029cum. = 0.829 Say 0.83 cum. Cost of sand filling for 10 metre pipe Rate as in Item No 18.41.1 = marked (A) TOTAL Cost of 10 metre Cost of one metre Say	cum	0.83	296.48	246.08 246.08 246.08 24.61 24.60

18.41: Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.7: 65 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 65mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 76.6mm = 301.6 Say 302mm Quantity of sand =10x0.45x0.302 =1.359cum Less for pipe $3.142/4(0.0766)^2$x10 = (-)0.046cum. = 1.313 Say 1.31 cum. Cost of sand filling for 10 metre pipe				
	Rate as in Item No 18.41.1 marked (A)	cum	1.31	296.48	388.39
	TOTAL				388.39
	Cost of 10 metre				388.39
	Cost of one metre				38.84
	Say				38.85

18.41: Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.8: 80 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 80mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 89.9mm = 314.9 Say 315mm Quantity of sand = 10x0.45x0.315= 1.418 cum.+ Less for pipe $3.142/4(0.0899)^2$x10 = (-)0.0640cum. = 1.354 Say 1.35 cum. Cost of sand filling for 10 metre pipe				
	Rate as in Item No 18.41.1 marked (A)	cum	1.35	296.48	400.25
	TOTAL				400.25
	Cost of 10 metre				400.25
	Cost of one metre				40.03
	Say				40.05

18.41 : Providing and filling sand of grading zone V or coarser gradealround the G.I. pipes in external work.

18.41.9: 100 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 100mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe=75mm+ Above the pipe = 150mm+				

Code	Description	Unit	Quantity	Rate	Amount
	Max. external dia of pipe = 115mm = 340mm Quantity of sand = 10x0.45x0.34 = 1.53 cum.+ Less for pipe 3.142/4(0.115)2x10 = (-)0.10 cum. = 1.43 cum. Cost of sand filling for 10 metre pipe				
	Rate as in Item No 18.41.1 marked (A)	cum	1.43	296.48	423.97
	TOTAL				423.97
	Cost of 10 metre				423.97
	Cost of one metre				42.40
	Say				42.40

18.41: Providing and filling sand of grading zone V or coarser grade alround the G.I. pipes in external work.

18.41.10:150 mm diameter pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of sand filling alround 150mm dia. pipe 10 metre long. Width of sand filling = 300mm Depth of sand filling under the pipe 75mm+ Above the pipe = 150mm+ Max. external dia of pipe = 166.5mm = 391.50mm Say 0.392m Quantity of sand = 10x0.60x0.392 = 2.35 cum.+ Less for pipe $3.142/4(0.167)^2x10$ = (-)0.22cum. = 2.13 cum. Cost of sand filling for 10 metre pipe				
	Rate as in Item No 18.41.1marked (A)	cum	2.13	296.48	631.50
	TOTAL				631.50
	Cost of 10 metre				631.50
	Cost of one metre				63.15
	Say				63.15

18.42: Boring with 100 mm diameter casing pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :

18.42.1: Upto 6 metres depth.

Code	Description	Unit	Quantity	Rate	Amount
	Labour For boring and removing the pipe-				
0116	Fitter	Day	0.50	151.50	75.75
0114	Beldar	Day	3.00	135.25	405.75
0010	Hire charges for derick monkey rope and other accessories	Day	0.50	500.00	250.00
1472	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre	metre	0.12	292.00	35.04
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				780.06
	Add for water charges @ 1 %				7.80
	TOTAL				787.86

Code	Description	Unit	Quantity	Rate	Amount
	Add for contractor's profit and over head @ 15%				118.18
	Cost of 6 metre				906.04
	Cost per metre				151.01
	Say				151.00

18.42 : Boring with 100 mm diameter casing pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :

18.42.2: Beyond 6m and upto 12 m depth.

Code	Description	Unit	Quantity	Rate	Amount
	Labour				
	For boring and removing the pipe-				
0116	Fitter	Day	0.62	151.50	93.93
0114	Beldar	Day	3.50	135.25	473.38
0010	Hire charges for derick monkey rope and other accessories	Day	0.62	500.00	310.00
1472	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre	metre	0.12	292.00	35.04
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				925.87
	Add for water charges @ 1 %				9.26
	TOTAL				935.13
	Add 15% for contractor's profit and over head				140.27
	Cost of 6 metre				1075.40
	Cost per metre				179.23
	Say				179.25

18.42: Boring with 100 mm diameter casing pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :

18.42.3 : Beyond 12 m and upto 18 m depth.

Code	Description	Unit	Quantity	Rate	Amount
	Labour				
	For boring and removing the pipe-				
0116	Fitter	Day	0.75	151.50	113.62
0114	Beldar	Day	4.00	135.25	541.00
0010	Hire charges for derick monkey rope and other accessories	Day	0.75	500.00	375.00
1472	Depreciation @ 2% of the cost of casing pipe 6metre @ Rs. per metre	metre	0.12	292.00	35.04
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				1 078.18
	Add for water charges @ 1 %				10.78
	TOTAL				1 088.96
	Add for contractor's profit and over head @ 15%				163.34
	Cost of 6 metre				1 252.30
	Cost per metre				208.72
	Say				208.70

18.43 : Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one strainer 1.5 long				
	Materials				
1882	Cost of strainer 40mm diameter 1.5m long	each	1.00	405.00	405.00
9999	Carriage to site	L.S.	13.52	1.00	13.52
	Labour:				
0116	Fitter	Day	0.17	151.50	25.76
0114	Beldar	Day	0.17	151.50	22.99
9999	Sundreis including hamp white lead etc.	L.S.	7.15	1.00	7.15
	TOTAL				474.42
	Add for water charges @ 1 %				4.74
	TOTAL				479.16
	Add for contractor's profit and over head @ 15%				71.87
	Cost of 1.5 metre				551.03
	Cost per metre				367.35
	Say				367.35

18.44: Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for a depth of 10 metre				
	Materials:				
1549	(A) 40mm G.I. pipe	metre	10.20	160.00	1632.00
2271	(A) carriage of 40mm pipe(36.5kg)	tonne	0.03723	47.49	1.76
	Added 2% wastage and fitting in "A"				
9999	White lead, hamp and oil etc.	L.S.	6.76	1.00	6.76
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.75	135.25	101.44
9999	Sundries	L S.	7.25	1.00	7.25
	TOTAL				1 799.2
	Add for water charges @ I %				17.99
	TOTAL				1 817.20
	Add for contractor's profit and over head @ 15%				272.58
	Cost for 10 metre				2089.78
	Cost per metre				208.98
	Say				209.00

18.45 : Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one pump				
	Materials:				
1693	Cost of hand pump	each	1.0	450.00	450.00
9999	Carriage	L.S.	13.52	1.00	13.52
	Labour:				
0116	Fitter	Day	0.10	1581.50	15.15
0114	Beldar	Day	0.10	135.25	13.52
9999	Sundries	L.S.	4.42	1.00	4.42
	TOTAL				469.61
	Add for water charges @ 1 %				4.97
	TOTAL				501.58
	Add for contractor's profit and over head @ 15%				75.24
	Cost for one hand pump				576.82
	Say				576.80

18.46 : Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.1: 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1641	15mm nominal bore .	each	1.00	32.00	32.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.11	151.50	16.66
0114	Beldar	Day	0.11	135.25	14.88
	TOTAL				65.36
	Add for water charges @ 1 %				0.65
	TOTAL				66.01
	Add 15% for contractor's profit and over heads				9.90
	Cost for each no.				75.91
	Say				75.90

18.46: Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.2: 20 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1642	20mm nominal bore.	each	1.00	50.00	50.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.11	151.50	16.66
0114	Beldar	Day	0.11	135.25	14.88
	TOTAL				83.36
	Add for water charges @ 1 %				0.83
	TOTAL				84.19
	Add for contractor's profit and over head @15%				12.63
	Cost for each no.				96.82
	Say				96.80

18.46: Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.3: 25 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1643	25mm nominal bore	each	1.00	59.00	59.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.11	151.50	16.66
0114	Beldar	Day	0.11	135.25	14.88
	TOTAL				92.36
	Add for water charges @ 1%				0.92
	TOTAL				93.28
	Add for contractor's profit and over head @15%				13.99
	Cost for each no.				107.27
	Say				107.25

18.46 : Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.4: 32 mm nominal

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1644	32mm nominal bore .	each	1.00	73.00	73.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.11	151.50	16.66
0114	Beldar	Day	0.11	135.25	14.88
	TOTAL				106.36
	Add for water charges @ 1%				1.06
	TOTAL				107.42
	Add for contractor's profit and over head @ 15%				16.11
	Cost for each no.				123.53
	Say				123.55

18.46 : Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.5: 40 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Material				
1645	40mm nominal bore .	each	1.00	108.00	108.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.11	151.50	16.66
0114	Beldar	Day	0.11	135.25	14.88
	TOTAL				141.36
	Add for water charges @ 1 %				1.41
	TOTAL				142.77
	Add for contractor's profit and over head @ 15%				21.42
	Cost for each no.				164.19
	Say				164.20

18.46 : Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.6: 50mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1646	50mm nominal bore.	each	1.0	158.00	158.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.15	151.50	22.72
0114	Beldar	Day	0.15	135.25	20.29
	TOTAL				202.83
	Add for water charges @ 1 %				2.03
	TOTAL				204.86
	Add for contractor's profit and over head @ 15%				30.73
	Cost for each no.				235.59
	Say				235.60

18.46: Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.7: 65mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1647	65m.m nominal bore	each	1.00	324.00	324.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labours				
0116	Fitter	Day	0.15	151.50	22.72
0114	Beldar	Day	0.15	135.25	20.29
	TOTAL				368.83
	Add for water charges @ 1%				3.69
	TOTAL				372.52
	Add for contractor's profit and over head @ 15%				55.88
	Cost for each no.				428.40
	Say				428.40

18.46: Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)

18.46.8: 80 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1648	80mm nominal bore	each	1.00	392.00	392.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labours				
0116	Fitter	Day	0.15	151.50	22.72
0114	Beldar	Day	0.15	135.25	20.29
	TOTAL				436.83
	Add for water charges @ 1%				4.37
	TOTAL				441.20
	Add for contractor's profit and over head @ 15%				661.18
	Cost for each no.				507.38
	Say				507.40

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.1: 15 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1641	15mm nominal bore	each	1.0	32.00	32.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labours				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				128.45
	Add for water charges @ 1 %				1.28
	TOTAL				129.73
	Add for contractor's profit and over head @ 15%				19.46
	Cost for each no.				149.19
	Say				149.20

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.2: 20 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1642	20mm nominal bore	each	1.00	50.00	50.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labours				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				146.45
	Add for water charges @ 1%				1.46
	TOTAL				147.91
	Add for contractor's profit and over head @ 15%				22.19
	Cost for each no.				170.10
	Say				170.10

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.3: 25 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1643	25mrn nominal	each	1.00	59.00	59.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labours				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				155.45
	Add for water charges @ 1 %				1.55
	TOTAL				157.00
	Add for contractor's profit and over head @ 15%				23.55
	Cost for each no.				180.55
	Say				180.55

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.4: 32 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1644	32mm nominal bore	each	1.00	73.00	73.00
9999	Carriage of materials and sundries	L.S.	1.82	1.00	1.82
	Labours				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				169.45
	Add for water charges @ 1%				1.69
	TOTAL				171.14
	Add for contractor's profit and over head @ 15%				25.67
	Cost for each no.				196.81
	Say				196.80

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.5 40 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1645	40 mm nominal bore	each	1.00	108.00	108.00
9999	Carriage of material and sundries	LS	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	0.33	135.25	44.63
	TOTAL				204.45
	Add for water charges @ 1%				2.04
	TOTAL				206.49
	Add for contractor's profit and over head @ 15%				30.97
	Cost for each no.				237.46
	Say				237.45

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.6 50 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1646	50mm nominal bore	each	1.00	158.00	158.00
9999	Carriage of material and sundries	LS	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.45	151.50	68.18
0114	Beldar	Day	0.45	135.25	60.86
	TOTAL				288.86
	Add for water charges @ 1%				2.89
	TOTAL				291.75
	Add for contractor's profit and over head @ 15%				43.76
	Cost for each no.				335.51
	Say				335.50

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.7 65 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1647	65mm nominal bore	each	1.00	324.00	324.00
9999	Carriage of material and sundries	LS	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.45	151.50	68.18

Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	0.45	135.25	60.86
	TOTAL				454.86
	Add for water charges @ 1 %				4.55
	TOTAL				459.41
	Add for contractor's profit and over head @ 15%				68.91
	Cost for each no.				528.32
	Say				528.30

18.47 Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :

18.47.8 80 mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
1648	80mm nominal bore	each	1.00	392.00	392.00
9999	Carriage of material and sundries	LS	1.82	1.00	1.82
	Labour:				
0116	Fitter	Day	0.45	151.50	68.18
0114	Beldar	Day	0.45	135.25	60.86
	TOTAL				522.86
	Add for water charges @ 1%				5.23
	TOTAL				528.09
	Add for contractor's profit and over head @ 15%				79.21
	Cost for each no.				607.30
	Say				607.30

18.48 Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 500 litres, tank 1 no.				
	Materials:				
1649	Polyethylene water storage tank	per litre	500.00	4.00	2 000.00
9999	Carriage to site	L.S.	179.40	1.00	179.40
9999	Placing at terrace	L.S.	89.70	1.00	89.70
	TOTAL				2 269.10
	Add for water charges @ 1 %				22.69
	TOTAL				2 291.79
	Add for contractor's profit and over head @ 15%				343.77
	Cost for 500 litre				2 635.56
	Cost per litre				5.27
	Say				5.25

18.49 Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931

18.49.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7257	15mm diameter C.P. brass bib cock	each	1.00	258.00	258.00
9999	Carriage of material and fixing changes	LS	11.57	1.00	11.57
	TOTAL				269.57
	Add for water charges @ 1 %				2.70
	TOTAL				272.27
	Add for contractor's profit and over head @ 15%				40.84
	Cost for 1 No.				313.11
	Say				313.10

18.50 Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.

18.50.1 15mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7258	15mm diameter C.P. brass long nose bib cock	each	1.00	220.00	220.00
9999	Carriage of material and fixing changes	LS	16.25	1.00	16.25
	TOTAL				236.25
	Add for water charges @ 1 %				2.36
	TOTAL				235.61
	Add for contractor's profit and over head @ 15%				35.79
	Cost for 1 No.				274.40
	Say				274.40

18.51 Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.

18.51.1 15mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7259	15mm diameter C.P. brass long body bib cock	each	1.00	258.00	258.00
9999	Carriage of material and fixing changes	LS	13.91	1.00	13.91
	TOTAL				271.91
	Add for water charges @ 1 %				2.72
	TOTAL				274.63
	Add for contractor's profit and over head @ 15%				41.19
	Cost for 1 No.				315.82
	Say				315.80

18.52 Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.

18.52.1 15mm nominal bore.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7260	15mm diameter C.P. brass stop cock (Concealed)	each	1.00	258.00	258.00
9999	Carriage of material and fixing changes	L.S.	11.57	1.00	11.57
	TOTAL				269.57
	Add for water charges @ 1 %				2.70
	TOTAL				272.27
	Add for contractor's profit and over head @ 15%				40.84
	Cost for 1 No.				313.11
	Say				313.10

18.53 Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931

18.53.1 15 mm nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7261	C.P. brass angle valve	each	1.00	288.00	288.00
9999	Carriage and fixing changes	L.S.	11.31	1.00	11.31
	TOTAL				299.31
	Add for water charges @ 1%				2.99
	TOTAL				302.30
	Add for contractor's profit and over head@ 15%				45.34
	Cost for 1 No.				347.64
	Say				347.65

18.54 Providing and fixing PTMT bib cock of approved quality and colour.

18.54.1 15mm nominal bore, 86 mm long, weighing not less than 88 gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7400	15mm dia P.T.M.T. bib cock	each	1.00	96.00	96.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				104.06
	Add for water charges @ 1%				1.04
	TOTAL				105.10
	Add for contractor's profit and over head@ 15%				15.76
	Cost for 1 No.				120.86
	Say				120.85

18.54 Providing and fixing PTMT bib cock of approved quality and colour.
18.54.2 15 mm nominal bore, 122mm long, weighing not less than 99 gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7401	15mm dia P.T.M.T. bib cock	each	1.00	135.00	135.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				143.06
	Add for water charges @ 1%				1.43
	TOTAL				144.49
	Add for contractor's profit and over head@ 15%				21.67
	Cost for 1 No.				166.16
	Say				166.15

18.54 Providing and fixing PTMT bib cock of approved quality and colour.
18.54.3 15 mm nominal bore, 165 mm long, weighing not less than 110 grams.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7402	15mm dia P.T.M.T. bib cock	each	1.00	155.00	155.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				163.06
	Add for water charges @ 1%				1.63
	TOTAL				164.69
	Add for contractor's profit and over head@ 15%				24.70
	Cost for 1 No.				189.39
	Say				189.40

18.54 Providing and fixing PTMT bib cock of approved quality and colour.
18.54.4 15mm nominal bore, 90mm long, weighing not less than 93 grams.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7859	15mm P.T.M.T. bib cock with nozzle.	each	1.00	110.00	110.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				118.06
	Add for water charges @ 1%				1.18
	TOTAL				119.24
	Add for contractor's profit and over head@ 15%				17.89
	Cost for 1 No.				137.13
	Say				137.15

18.55 Providing and fixing PTMT stop cock of approved quality and colour.
18.55.1 15 mm nominal bore, 86mm long, weighing not less than 88 grams.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7403	15mm dia P.T.M.T. stop cock	each	1.00	96.00	96.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				104.06
	Add for water charges @ 1%				1.04
	TOTAL				105.10
	Add for contractor's profit and over head@ 15%				15.76
	Cost for 1 No.				120.86
	Say				120.85

18.55 Providing and fixing PTMT stop cock of approved quality and colour.
18.55.2 20mm nominal bore, 89mm long, weighing not less than 88 grams.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7405	20 mm dia P.T.M.T. stop cock	each	1.00	120.00	120.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				128.06
	Add for water charges @ 1%				1.28
	TOTAL				129.34
	Add for contractor's profit and over head@ 15%				19.40
	Cost for 1 No.				148.74
	Say				148.75

18.55 Providing and fixing PTMT stop cock of approved quality and colour.
18.55.3 Concealed stop cock, 15mm nominal bore, 108mm long, weighing not less than 108 grams.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7861	P.T.M.T. stop cock (concealed) 15 mm	each	1.00	160.00	160.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				168.06
	Add for water charges @ 1%				1.68
	TOTAL				169.74
	Add for contractor's profit and over head@ 15%				25.46
	Cost for 1 No.				195.20
	Say				195.20

18.56 Providing and fixing PTMT pillar cock of approved quality and colour .
18.56.1 15mm nominal bore, 107mm long, weighing not less than 110 grams.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7406	15mm dia P.T.M.T. pillar cock	each	1.00	150.00	150.00
9999	Carriage of material and fixing changes	L.S.	9.49	1.00	9.49
	TOTAL				159.49
	Add for water charges @ 1%				1.59
	TOTAL				161.08
	Add for contractor's profit and over head@ 15%				24.16
	Cost for 1 No.				185.24
	Say				185.25

18.56 Providing and fixing PTMT pillar cock of approved quality and colour .

18.56.2 15mm nominal bore, 125mm long foam flow, Weighing not less than 120 gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7410	15mm dia P.T.M.T. bib cockwith flange (fancy)	each	1.00	220.00	200.00
9999	Carriage of material and fixing changes	L.S.	9.49	1.00	9.49
	TOTAL				229.49
	Add for water charges @ 1%				2.29
	TOTAL				231.78
	Add for contractor's profit and over head @ 15%				34.77
	Cost for 1 No.				266.55
	Say				266.55

18.57 Providing and fixing PTMT, push cock of approved quality and colour.

18.57.1 15 mm nominal bore, 98mm long, Weighing not less than 75 gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7407	15mm P.T.M.T. push cock	each	1.00	90.00	90.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				98.06
	Add for water charges @ 1%				0.98
	TOTAL				99.04
	Add for contractor's profit and over head@ 15%				14.86
	Cost for 1 No.				113.90
	Say				113.90

18.57 Providing and fixing PTMT, push cock of approved quality and colour.

18.57.2 15 mm nominal bore, 80mm long, Weighing not less than 46 gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7408	P.T.M.T. push cock 12mm dia 20 mm BSP	each	1.00	75.00	75.00
9999	Carriage of material and fixing changes	L.S.	8.06	1.00	8.06
	TOTAL				83.06
	Add for water charges @ 1%				0.83
	TOTAL				83.89
	Add for contractor's profit and over head 15%				12.58
	Cost for 1 No.				96.47
	Say				96.45

18.58 Providing and fixing PTMT grating of approved quality and colour.
18.58.1 Circular type.
18.58.1.1 100 mm nominal dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7409	100mm dia P.T.M.T. grating	each	1.00	30.00	30.00
9999	Carriage of material and fixing changes	L.S.	4.16	1.00	4.16
	TOTAL				34.16
	Add for water charges @ 1%				0.34
	TOTAL				34.50
	Add for contractor's profit and over head 15%				5.18
	Cost for 1 No.				39.68
	Say				39.70

18.58 Providing and fixing PTMT grating of approved quality and colour.
18.58.1 Circular type.
18.58.1.2 125 mm nominal dia with 25 mm waste hole.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7411	125mm dia P.T.M.T. grating	each	1.00	36.00	36.00
9999	Carriage of material and fixing changes	L.S.	4.16	1.00	4.16
	TOTAL				40.16
	Add for water charges @ 1%				0.40
	TOTAL				40.56
	Add for contractor's profit and over head 15%				6.08
	Cost for 1 No.				46.64
	Say				46.65

18.58 Providing and fixing PTMT grating of approved quality and colour.
18.58.2 Rectangular type with openable circular lid.
18.58.2.1 150 mm nominal size square 100 mm diameter of the inner hinged round grating.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	Materials:				
7412	150mm size square P.T.M.T. grating	each	1.00	90.00	90.00
9999	Carriage of material and fixing changes	L.S.	4.16	1.00	4.16
	TOTAL				94.16
	Add for water charges @ 1%				0.94
	TOTAL				95.10
	Add for contractor's profit and over head 15%				14.26
	Cost for 1 No.				109.36
	Say				109.35

18.59 Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately):

18.59.1 50mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 no. double acting air valves				
	Materials:				
7415	50mm dia, double acting air valve	each	10.00	3 050.00	30 500.00
9999	Carriage of air valves	L.S.	26.00	1.00	26.00
9999	Labour for faying double acting air valve	L.S.	39.00	1.00	39.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.1 of SH : Water Supply)	each	10.00	65.60	656.00
	TOTAL				31221.00
	Add for water charges @ 1% on all except 'A'				305.65
	TOTAL				31 526.65
	Add for contractor's profit and over head @ 15% on all except 'A'				4 630.60
	Cost for 10 air valves				36 157.25
	Cost for 1 air valves				3 615.73
	Say				3 615.70

18.59 Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately):

18.59.2 80 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 no. double acting air valves				
	Materials:				
7416	80mm dia, double acting air valve	each	10.00	4 480.00	44 800.00
9999	Carriage of air valves	L.S.	26.00	1.00	26.00
9999	Labour for faying double acting air valve	L.S.	39.00	1.00	39.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.1 of SH : Water Supply)	each	10.00	65.60	656.00
	TOTAL				45 521.00
	Add for water charges @ 1% on all except 'A'				448.65
	TOTAL				45 969.65
	Add for contractor's profit and over head @ 15% on all except 'A'				6 797.05
	Cost for 10 air valves				52 766.70
	Cost for 1 air valves				5 276.67
	Say				5 276.65

18.59 Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately):

18.59.3 100mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 no. double acting air valves				
	Materials:				
7417	100mm dia, double acting air valve	each	10.00	5 800.00	58 000.00
9999	Carriage of air valves	L.S.	26.00	1.00	26.00
9999	Labour for laying double acting air valve	L.S.	52.00	1.00	52.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.2 of SH : Water Supply)	each	10.00	113.00	1 130.00
	TOTAL				59 208.00
	Add for water charges @ 1% on all except 'A'				580.78
	TOTAL				59 788.78
	Add for contractor's profit and over head @ 15% on all except 'A'				8 798.82
	Cost for 10 air valves				68 587.60
	Cost for 1 air valves				6 858.76
	Say				6 858.75

18.60 Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately):

18.60.1 80 mm dia nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. water meter				
	Materials:				
7418	80mm dia. water meter	each	1.00	1 800.00	1 800.00
9999	Testing charges	L.S.	130.00	1.00	130.00
9999	Carriage of water meter	L.S.	26.00	1.00	26.00
9999	Labour for faying water meter	L.S.	39.00	1.00	39.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.1 of SH : Water Supply)	each	2.00	65.60	131.20
	TOTAL				2 126.20
	Add for water charges @ 1% on all except 'A'				19.95
	TOTAL				2 146.15
	Add for contractor's profit and over head @ 15% on all except 'A'				302.24
	Cost for 1 water meter				2 448.39
	Say				2 448.40

18.60 Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately):

18.60.2 100 mm dia nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. water meter				
	Materials:				
7419	100mm dia. water meter	each	1.00	2 800.00	2 800.00
9999	Testing charges	L.S.	130.00	1.00	130.00
9999	Carriage of water meter	L.S.	26.00	1.00	26.00
9999	Labour for faying water meter	L.S.	52.00	1.00	52.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.2 of SH : Water Supply)	each	2.00	113.00	226.00
	TOTAL				3 234.00
	Add for water charges @ 1% on all except 'A'				30.08
	TOTAL				3 264.08
	Add for contractor's profit and over head @ 15% on all except 'A'				455.71
	Cost for 1 water meter				3 719.79
	Say				3 719.80

18.60 Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately):

18.60.3 150 mm dia nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. water meter valves				
	Materials:				
7420	150mm dia. water meter	each	1.00	4000.00	4000.00
9999	Testing charges	L.S.	156.00	1.00	156.00
9999	Carriage of water meter	L.S.	39.00	1.00	39.00
9999	Labour for faying water meter	L.S.	65.00	1.00	65.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.4 of SH : Water Supply)	each	2.00	156.90	313.80
	TOTAL				4573.80
	Add for water charges @ 1% on all except 'A'				42.60
	TOTAL				4616.40
	Add for contractor's profit and over head @ 15% on all except 'A'				645.39
	Cost for 1 water meter				5261.79
	Say				5261.80

18.60 Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately):

18.60.4 200 mm dia nominal bore

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. water meter				
	Materials:				
7421	200mm dia. water meter	each	1.00	4 500.00	4 500.00
9999	Testing charges	L.S.	156.00	1.00	156.00
9999	Carriage of water meter	L.S.	52.00	1.00	52.00
9999	Labour for faying water meter	L.S.	104.00	1.00	104.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.5 of SH : Water Supply)	each	2.00	162.70	325.40
	TOTAL				5 137.40
	Add for water charges @ 1% on all except 'A'				48.12
	TOTAL				5 185.52
	Add for contractor's profit and over head @ 15% on all except 'A'				729.02
	Cost for 1 water meter				5 914.54
	Say				5 914.55

18.61 Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :

18.61.1 80 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. dirt box strainer				
	Materials:				
7422	80mm dia. dirt box strainer	each	1.00	2 500.00	2 500.00
9999	Carriage of dirt box strainer	L.S.	26.00	1.00	26.00
9999	Labour for faying dirt box strainer	L.S.	39.00	1.00	39.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.1 of SH : Water Supply)	each	2.00	65.60	131.20
	TOTAL				2 696.20
	Add for water charges @ 1% on all except 'A'				25.65
	TOTAL				2 721.85
	Add for contractor's profit and over head @ 15% on all except 'A'				388.60
	Cost for 1 dirt box strainer				3 110.45
	Say				3 110.45

18.61 Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :

18.61.2 100mm dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. dirt box strainer				
	Materials:				
7423	100mm dia. dirt box strainer	each	1.00	3 750.00	3 750.00
9999	Carriage of dirt box strainer	L.S.	26.00	1.00	26.00
9999	Labour for faying dirt box strainer	L.S.	52.00	1.00	52.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.2 of SH : Water Supply)	each	2.00	113.00	226.00
	TOTAL				4 054.00
	Add for water charges @ 1% on all except 'A'				38.28
	TOTAL				4 092.28
	Add for contractor's profit and over head @ 15% on all except 'A'				579.94
	Cost for 1 dirt box strainer				4 672.22
	Say				4 672.20

18.61 Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :

18.61.3 150 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. dirt box strainer				
	Materials:				
7424	150mm dia. dirt box strainer	each	1.0	4850.00	4 850.00
9999	Carriage of dirt box strainer	L.S.	39.00	1.00	39.00
9999	Labour for faying dirt box strainer	L.S.	65.00	1.00	65.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.4 of SH : Water Supply)	each	2.0	156.90	313.80
	TOTAL				5 267.80
	Add for water charges @ 1% on all except 'A'				49.54
	TOTAL				5 317.34
	Add for contractor's profit and over head @ 15% on all except 'A'				750.53
	Cost for 1 dirt box strainer				6 067.87
	Say				6 067.85

18.61 Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :

18.61.4 200mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no. dirt box strainer				
	Materials:				
7425	200mm dia. dirt box strainer	each	1.00	6 800.00	6 800.00
9999	Carriage of dirt box strainer	L.S.	52.00	1.00	52.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Labour for faying dirt box strainer	L.S.	104.00	1.00	104.00
	Providing flanged joints to double acting air valves with bolts, nuts and rubber insertions etc.				
(A)	(Rate as per item no 18.30.5 of SH : Water Supply)	each	2.00	162.70	325.40 (A)
	TOTAL				7 281.40
	Add for water charges @ 1% on all except 'A'				69.56
	TOTAL				7 350.96
	Add for contractor's profit and over head @ 15% on all except 'A'				1 053.83
	Cost for 1 dirt box strainer				8 404.79
	Say				8 404.80

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated rod with L.P./ H.P.H.D. plastic ball.

18.62.1 15 mm nominal bore, 105mm long, weighing not less than 138gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7495	P.T.M.T. ball cock 15 mm complete with aluminium rod & H.D. ball	each	1.00	121.00	121.00
9999	Carriage of materials and fixing charges	L.S.	21.58	1.00	21.58
	Total				142.58
	Add 1 % for water charges				1.43
	TOTAL				144.01
	Add 15% for contractor's profit and overheads				21.60
	Cost or one no				165.61
	Say				165.60

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.

18.62.2 20 mm nominal bore, 120mm long, weighing not less than 198gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7496	P.T.M.T. ball cock 20 mm complete with aluminium rod & H.D. ball	each	1.00	175.00	175.00
9999	Carriage of materials and fixing charges	L.S.	26.91	1.00	26.91
	Total				201.91
	Add 1 % for water charges				2.02
	TOTAL				203.93
	Add 15% for contractor's profit and overheads				30.59
	Cost or one no				234.52
	Say				234.50

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plaitic ball.

18.62.3 25 mm nominal bore, 152mm long, weighing not less than 440gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7497	P.T.M.T. ball cock 25 mm complete with aluminium rod & H.D. ball	each	1.0	396.00	396.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.00	32.24
	Total				428.24
	Add 1 % for water charges				4.28
	TOTAL				432.52
	Add 15% for contractor's profit and overheads				64.88
	Cost or one no				497.40
	Say				497.40

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.

18.62.4 40mm nominal bore, 206mm long, weighing not less than 690gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials:				
7498	Ball Cock 40mm Complete with Epoxy Coated Aluminium Road & H.D. Ball	Each	1.00	745.00	745.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.00	32.24
	TOTAL				777.24
	Add 1% for water charges				7.77
	TOTAL				785.01
	Add 15% for contractor's profit and overheads				117.75
	Cost of one no				902.76
	Say				902.75

18.62 Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated

18.62.5 50mm nominal bore, 242mm long, weighing not less than 1240gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials:				
7499	Ball Cock 50mm Complete with Epoxy Coated Aluminium Road & H.D. Ball	Each	1.00	1 120.00	1 120.00
9999	Carriage of materials and fixing charges	L.S.	32.24	1.00	32.24
	TOTAL				1 152.24
	Add 1% for water charges				11.52
	TOTAL				1 163.76
	Add 15% for contractor's profit and overheads				174.56
	Cost of one no				1 338.32
	Say				1 338.30

18.63 Providing and fixing PTMT angle stop cock 15 mm nominal bore, weighing not less than 85gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7500	P.T.M.T. angle stop cock with flange	each	1.0	120.00	120.00
9999	Carriage of materials and fixing charges	L.S.	8.06	1.00	8.06

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				128.06
	Add 1 % for water charges				1.28
	TOTAL				129.34
	Add 15% for contractor's profit and overheads				19.40
	Cost of one no				148.74
	Say				148.75

18.64 Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7501	Swiveling shower 15 mm	each	1.00	81.00	81.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.00	6.76
	TOTAL				87.76
	Add 1% for water charges				0.88
	TOTAL				88.64
	Add 15% for contractor's profit and overheads				13.30
	Cost of one no				101.94
	Say				101.95

18.65 Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements weighing not less than 106 gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7509	Soap Dish/Holder 138x102x75mm	Each	108.00	1.00	108.00
9999	Carriage of materials and fixing charges	L.S.	6.76	1.00	6.76
	TOTAL				114.76
	Add 1 % for water charges				1.15
	TOTAL				115.91
	Add 15% for contractor's profit and overheads				17.39
	Cost of one no				133.30
	Say				133.30

18.66 Providing and laying S&S C.I. Standard specials such as tees, bends, collars tapers and caps etc, suitable for flanged jointing as per IS : 1538 :

18.66.1 Upto300mmdia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7708	Cost of specials	quintal	1.00	3 530.00	3530.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				3 634.98
	Add for water charges @ 1% on all except 'A'				35.35
	TOTAL				3 670.33
	Add 15% for contractor's profit and overheads on all except 'A'				535.51
	Cost of 1 quintal				4 205.84
	Say				4 205.85

18.66 Providing and laying S&S C.I. Standard specials such as tees, bends, collars tapers and caps etc, suitable for flanged jointing as per IS : 1538 :

18.66.2 Above 300 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7709	Cost of specials	quintal	1.00	3 988.00	3 988.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				4 092.98
	Add for water charges @ 1% on all except 'A'				39.93
	TOTAL				4 132.91
	Add 15% for contractor's profit and overheads on all except 'A'				604.90
	Cost of 1 quintal				4 737.81
	Say				4 737.80

18.67 Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382

18.67.1 Upto 300mmdia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7710	Cost of specials	quintal	1.00	5 338.00	5 338.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				5 442.98
	Add for water charges @ 1% on all except 'A'				53.43
	TOTAL				5 496.41
	Add 15% for contractor's profit and overheads on all except 'A'				809.42
	Cost of 1 quintal				6 305.83
	Say				6 305.85

18.67 Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382

18.67.2 Above 300 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7711	Cost of specials	quintal	1.00	5 580.00	5 580.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				5 684.98
	Add for water charges @ 1% on all except 'A'				55.85
	TOTAL				5 740.83
	Add 15% for contractor's profit and overheads on all except 'A'				846.09
	Cost of 1 quintal				6 586.92
	Say				6 586.90

18.68 Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523

18.68.1 Upto 600mmdia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7682	Cost of specials	quintal	1.00	8 938.00	8 938.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				9 042.98
	Add for water charges @ 1% on all except 'A'				89.43
	TOTAL				9 132.41
	Add 15% for contractor's profit and overheads on all except 'A'				1 354.82
	Cost of 1 quintal				10487.23
	Say				10487.25

18.68 Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523

18.68.2 Above 600 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7683	Cost of specials	quintal	1.00	13 413.00	13 413.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				13 517.98
	Add for water charges @ 1% on all except 'A'				134.18
	TOTAL				13 652.16
	Add 15% for contractor's profit and overheads on all except 'A'				2 032.79
	Cost of 1 quintal				15 684.95
	Say				15 685.00

18.69 Providing and laying D.I Specials of Class K-12suitable for mechanical jointing as per IS :9523

18.69.1 Upto 600 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7684	Cost of specials	quintal	1.00	9 400.00	9 400.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				9 504.98
	Add for water charges @ 1% on all except 'A'				94.05
	TOTAL				9 599.03
	Add 15% for contractor's profit and overheads on all except 'A'				1 424.82
	Cost of 1 quintal				11 023.85
	Say				11 023.85

18.69 Providing and laying D.I. Specials of Class K - 12 suitable for mechanical jointing as per IS : 9523

18.69.2 Above 600 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 quintal				
	Materials :-				
7685	Cost of specials	quintal	1.00	14239.00	14 239.00
2309	Carriage of materials	tonne	0.10	47.29	4.73
	Labour				
(A)	For laying Rate as per item No. 18.24	quintal	1.00	100.25	100.25
	TOTAL				14 343.98
	Add for water charges @ 1% on all except 'A'				142.44
	TOTAL				14 486.42
	Add 15% for contractor's profit and overheads on all except 'A'				2 157.93
	Cost of 1 quintal				16 644.35
	Say				16 644.40

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.1 100 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7666	Cost of rubber gasket	Each	50.0	25.00	1 250.00
	Labour				
0116	Fitter	Day	1.00	151.50	151.50
0117	Asstt Fitter	Day	1.00	141.60	141.60
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				1 678.35
	Add 1% for water charges				16.78
	TOTAL.				1695.13
	Add W/o for contractor's profit and overheads				254.27
	Cost for 50 joints				1 949.40
	Cost for 1 joint				38.99
	Say				39.00

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.2 150 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7668	Cost of rubber gasket	Each	50.0	35.00	1 750.00
	Labour				
0116	Fitter	Day	1.50	151.50	227.25
0117	Asstt. Fitter	Day	1.50	141.60	212.40
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				2 595.40
	Add 1 % for water charges				25.95
	TOTAL				2 621.35
	Add 15% for contractor's profit and overheads				393.20
	Cost for 50 joints				3 014.55
	Cost for 1 joint				60.29
	Say				60.30

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.3 200 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7669	Cost of rubber gasket	Each	50.00	62.00	3 100.00
	Labour				
0116	Fitter	Day	2.00	151.50	303.00
0117	Asstt. Fitter	Day	2.00	141.60	283.20
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				4 227.20
	Add 1 % for water charges				42.27
	TOTAL.				4 269.47
	Add 15% for contractor's profit and overheads				640.42
	Cost for 50 joints				4 909.89
	Cost for 1 joint				98.20
	Say				98.20

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.4 250 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7670	Cost of rubber gasket	Each	50.0	68.00	3 400.00
	Labour				
0116	Fitter	Day	2.50	151.50	378.75
0117	Asstt. Fitter	Day	2.50	141.60	354.0
0114	Beldar	Day	5.00	135.25	676.25
	TOTAL				4 809.00
	Add 1 % for water charges				48.09
	TOTAL.				4 857.09
	Add 15% for contractor's profit and overheads				728.56
	Cost for 50 joints				5 585.65
	Cost for 1 joint				111.71
	Say				111.70

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.5 300 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7671	Cost of rubber gasket	Each	50.0	98.00	4 900.00
	Labour				
0116	Fitter	Day	3.00	151.50	454.50
0117	Asstt. Fitter	Day	3.00	141.60	424.80
0114	Beldar	Day	6.00	135.25	811.50
	TOTAL				6 590.80
	Add 1 % for water charges				65.91
	TOTAL				6 656.71
	Add 15% for contractor's profit and overheads				998.51
	Cost for 50 joints				7 655.22
	Cost for 1 joint				153.10
	Say				153.10

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:
18.70.6 350 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7672	Cost of rubber gasket	Each	50.00	123.00	6150.00
	Labour				
0116	Fitter	Day	3.00	151.50	454.50
0117	Asstt. Fitter	Day	3.00	141.60	424.80
0114	Beldar	Day	6.00	135.25	811.50
	TOTAL				7 840.80
	Add 1 % for water charges				78.41
	TOTAL				7919.21
	Add 15% for contractor's profit and overheads				1 187.88
	Cost for 50 joints				9 107.09
	Cost for 1 joint				182.14
	Say				182.15

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:
18.70.7 400 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7673	Cost of rubber gasket	Each	50.00	248.00	12400.00
	Labour				
0116	Fitter	Day	4.00	151.50	606.00
0117	Asstt. Fitter	Day	4.00	141.60	566.40
0114	Beldar	Day	8.00	135.25	1082.00
	TOTAL				14654.40
	Add 1 % for water charges				146.54
	TOTAL				14800.94
	Add 15% for contractor's profit and overheads				2220.14
	Cost for 50 joints				17021.08
	Cost for 1 joint				340.42
	Say				340.40

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:
18.70.8 450 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7674	Cost of rubber gasket	Each	50.00	275.00	13750.00
	Labour				
0116	Fitter	Day	4.50	151.50	681.75
0117	Asstt. Fitter	Day	4.50	141.60	637.20
0114	Beldar	Day	9.00	135.25	1217.25
	TOTAL				16286.20
	Add 1 % for water charges				162.86
	TOTAL				16499.06
	Add 15% for contractor's profit and overheads				2467.36
	Cost for 50 joints				18916.42
	Cost for 1 joint				378.33
	Say				378.35

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:
18.70.9 500 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7675	Cost of rubber gasket	Each	50.00	285.00	14250.00
	Labour				
0116	Fitter	Day	4.75	151.50	719.62
0117	Asstt. Fitter	Day	4.75	141.60	672.60
0114	Beldar	Day	9.50	135.25	1284.88
	TOTAL				16927.10
	Add 1 % for water charges				169.27
	TOTAL				17096.37
	Add 15% for contractor's profit and overheads				2564.46
	Cost for 50 joints				19660.83
	Cost for 1 joint				393.22
	Say				393.20

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:
18.70.10 600 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7676	Cost of rubber gasket	Each	50.00	348.00	17400.00
	Labour				
0116	Fitter	Day	6.50	151.50	984.75
0117	Asstt. Fitter	Day	6.50	141.60	920.40
0114	Beldar	Day	13.00	135.25	1758.25
	TOTAL				21063.40
	Add 1 % for water charges				210.63
	TOTAL				21274.03
	Add 15% for contractor's profit and overheads				3191.10
	Cost for 50 joints				24465.13
	Cost for 1 joint				489.30
	Say				489.30

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:
18.70.11 650 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7677	Cost of rubber gasket	Each	50.00	550.00	27500.00
	Labour				
0116	Fitter	Day	7.70	151.50	1166.55
0117	Asstt. Fitter	Day	7.70	141.60	1090.32
0114	Beldar	Day	15.40	135.25	2082.85
	TOTAL				31839.72
	Add 1 % for water charges				318.40
	TOTAL				32158.12
	Add 15% for contractor's profit and overheads				4823.72
	Cost for 50 joints				36981.84
	Cost for 1 joint				739.64
	Say				739.65

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.12 700 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7678	Cost of rubber gasket	Each	50.00	648.00	32400.00
	Labour				
0116	Fitter	Day	7.70	151.50	1166.55
0117	Asstt. Fitter	Day	7.70	141.60	1090.32
0114	Beldar	Day	15.40	135.25	2082.85
	TOTAL				36739.72
	Add 1 % for water charges				367.40
	TOTAL				37107.12
	Add 15% for contractor's profit and overheads				5566.07
	Cost for 50 joints				42673.19
	Cost for 1 joint				853.46
	Say				853.45

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.13 800 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7679	Cost of rubber gasket	Each	50.00	725.00	36250.00
	Labour				
0116	Fitter	Day	8.50	151.50	1287.75
0117	Asstt. Fitter	Day	8.50	141.60	1203.60
0114	Beldar	Day	17.00	135.25	2299.25
	TOTAL				41040.60
	Add 1 % for water charges				410.41
	TOTAL				41451.01
	Add 15% for contractor's profit and overheads				6217.65
	Cost for 50 joints				47668.66
	Cost for 1 joint				953.37
	Say				953.35

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.14 900 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7680	Cost of rubber gasket	Each	50.00	968.00	48 400.00
	Labour				
0116	Fitter	Day	10.00	151.50	1 515.00
0117	Asstt. Fitter	Day	10.00	141.60	1 416.00
0114	Beldar	Day	20.00	135.25	2 705.00
	TOTAL				54 036.00
	Add 1% for water charges				540.36
	TOTAL				54 576.36
	Add 15% for contractor's profit and overheads				8 186.45
	Cost for 50 joints				62 762.81
	Cost for 1 joint				1 255.26
	Say				1 255.25

18.70 Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:

18.70.15 1000 mm dia pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 50 Joints				
	Materials :-				
7681	Cost of rubber gasket	Each	50.0	1 188.00	59 400.00
	Labour				
0116	Fitter	Day	11.00	151.50	1 666.50
0117	Asstt. Fitter	Day	11.00	141.60	1 557.60
0114	Beldar	Day	22.00	135.25	2 975.50
	TOTAL				65 599.60
	Add 1% for water charges				656.00
	TOTAL				66 255.60
	Add 15% for contractor's profit and overheads				9 938.34
	Cost for 50 joints				76 193.94
	Cost for 1 joint				1 523.88
	Say				1 523.90

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):

18.71.1 100 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	100 mm dia. cast iron pipes double flanged weight of 1m pipe = 27.00 kg				
	Weight of 5 m pipes 27.00x5 = 135.00 Kg				
7712	Cost of pipe	metre	5.00	977.00	4 885.00
2319	Carriage of pipes	100 metre	5.00	116.30	5.82
	Labour				
(A)	For laying Rate same as per item no 18.23 SH : Water Supply	quintal	1.35	55.55	74.99

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				4 965.81
	Add for water charges @1% on all except 'A'				48.91
	TOTAL				5 014.72
	Addfor contractor's profit and overheads @15% on all execpt 'A'				740.96
	Cost for 5 metre				5 755.68
	Cost per metre				1 151.14
	Say				1 151.15

18.71 Providing and laying Double Flanged (screwed/welded) Centrifugally (Spun) Cast Iron, Class B (IS: 1536):

18.71.2 150 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	150 mm dia. cast iron pipes double flanged weight of 1m pipe = 44.10 kg				
	Weight of 5 m pipes 44.10x5 = 220.50 Kg				
7713	Cost of pipe	metre	5.00	1511.00	7 555.00
2321	Carriage of pipes	100 metre	5.00	193.83	9.69
	Labour				
(A)	For laying Rate same as per item no 18.23 SH : Water Supply	quintal	2.21	55.55	122.77
	TOTAL				7 687.46
	Add for water charges @1% on all except 'A'				75.65
	TOTAL				7 763.11
	Add for contractor's profit and overheads @ 15% on all execpt 'A'				1 146.05
	Cost for 5 metre				8 909.16
	Cost per metre				1 781.83
	Say				1 781.85

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):

18.71.3 200 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials:-				
	200 mm dia. cast iron pipes double flanged weight of 1m pipe = 63.50 kg				
	Weight of 5 m pipes 63.50 0x5 = 317.50 Kg				
7714	Cost of pipe	metre	5.00	2092.00	10460.00
2322	Carriage of pipes	100 metre	5.00	315.30	15.76
	Labour				
(A)	For laying Rate same as per item no 18.23 SH : Water Supply	quintal	3.18	55.55	176.65
	TOTAL				10652.41
	Add for water charges @1% on all except 'A'				104.76
	TOTAL				10757.17
	Add for contractor's profit and overheads @15% on all execpt 'A'				1587.08
	Cost for 5 metre				12344.25
	Cost per metre				2468.85
	Say				2468.85

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):

18.71.4 250 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	250 mm dia. cast iron pipes double flanged				
	weight of 1m pipe= 85.30 kg				
	Weight of 5 m pipes 85.30 x5 = 426.50 Kg				
7715	Cost of pipe	metre	5.00	2800.00	14000.00
2323	Carriage of pipes	100 metre	5.00	448.05	22.40
	Labour				
(A)	For laying Rate same as per item no 18.23	quintal	4.27	55.55	237.20
	SH : Water Supply				
	TOTAL				14259.60
	Add for water charges @1% on all except 'A'				140.22
	TOTAL				14399.82
	Add for contractor's profit and overheads				2124.39
	@15% on all execpt 'A'				
	Cost for 5 metre				16524.21
	Cost per metre				3304.84
	Say				3304.85

18.71 Providing and laying Double Flanged (screwed/welded) Centrifugally (Spun) Cast Iron, Class B (IS: 1536):

18.71.5 300 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	300 mm dia. cast iron pipes double flanged				
	weight of 1m pipe= 110.00 kg				
	Weight of 5 m pipes 110.00x5 = 550.00 Kg				
7716	Cost of pipe	metre	5.00	3 559.00	17795.00
2324	Carriage of pipes	100 metre	5.00	553.80	27.69
	Labour				
(A)	For laying Rate same as per item no 18.23	quintal	5.50	55.55	305.52
	SH : Water Supply				
	TOTAL				18 128.21
	Add for water charges @1% on all except 'A'				178.23
	TOTAL				18 306.44
	Add for contractor's profit and overheads				2 700.14
	@15% on all execpt 'A'				
	Cost for 5 metre				21 006.58
	Cost per metre				4 201.32
	Say				4 201.30

18.71 Providing and laying Double Flanged (screwed/welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :

18.71.6 350 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	350 mm dia. cast iron pipes double flanged				
	weight of 1m pipe = 135.70 kg				
	Weight of 5 m pipes 135.70x5 = 678.50 Kg				
7717	Cost of pipe	metre	5.00	4553.00	22765.00

Code	Description	Unit	Quantity	Rate	Amount
	Carriage of pipes	100 metre	5.00	775.32	38.77
	Labour				
	S&fcS				
(A)	For laying Rate same as per item no 18.23	quintal	6.79	55.55	377.18
	SH : Water Supply				
	TOTAL				23180.95
	Add for water charges @1% on all except 'A'				228.04
	TOTAL				23408.99
	Add for contractor's profit and overheads @15% on all execpt 'A'				3454.77
	Cost for 5 metre				26863.76
	Cost per metre				5372.75
	Say				5372.75

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):

18.71.7 400 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	400 mm dia. cast iron pipes double flanged weight of 1m pipe = 166.80kg				
	Weight of 5 m pipes 166.80x5 = 834.00 Kg				
7718	Cost of pipe	metre	5.00	5 885.00	29 425.00
2326	Carriage of pipes	100 metre	5.00	1 057.26	52.86
	Labour				
(A)	For laying Rate same as per item no 18.23	quintal	8.34	55.55	463.29
	SH : Water Supply				
	TOTAL				29 941.15
	Add for water charges @1% on all except 'A'				294.78
	TOTAL				30 235.93
	Add for contractor's profit and overheads @15%onallexecpt'A'				4 465.90
	Cost for 5 metre				34 701.83
	Cost per metre				6 940.37
	Say				6 940.35

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS: 1536):

18.71.8 450 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	450 mm dia. cast iron pipes double flanged weight of 1m pipe= 201.600 kg				
	Weight of 5 m pipes 201.600x5 = 1008.00 Kg				
7719	Cost of pipe	metre	5.00	7 627.00	38 135.00
2327	Carriage of pipes	100 metre	5.00	1 292.20	64.61
	Labour				
(A)	For laying Rate same as per item no 18.23	quintal	10.08	55.55	559.94
	SH : Water Supply				
	TOTAL				38 759.55

Code	Description	Unit	Quantity	Rate	Amount
	Add for water charges @1% on all except 'A'				382.00
	TOTAL				39 141.55
	Add for contractor's profit and overheads @15% on all execpt 'A'				5 787.24
	Cost for 5 metre				44 928.79
	Cost per metre				8 985.76
	Say				8 985.75

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):

18.71.9 500 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	500 mm dia. cast iron pipes double flanged weight of 1m pipe= 234.80 kg				
	Weight of 5 m pipes 234.80x5 = 1174.00 Kg				
7720	Cost of pipe	metre	5.00	9 962.00	49 810.00
2328	Carriage of pipes	100 metre	5.00	1292.20	64.61
	Labour				
(A)	For laying Rate same as per item no 18.23 SH : Water Supply	quintal	11.74	55.55	652.16
	TOTAL				50 526.77
	Add for water charges @1% on all except 'A'				498.75
	TOTAL				51025.52
	Add for contractor's profit and overheads @15%onallexecpt'A'				7 556.00
	Cost for 5 metre				58 581.52
	Cost per metre				11 716.30
	Say				11 716.30

18.71 Providing and laying Double Flanged (screwed/ welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):

18.71.10 600 mm dia C.I. Double Flanged Pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	600 mm dia. cast iron pipes double flanged weight of 1m pipe= 315.30kg				
	Weight of 5 m pipes 315.30x5 = 1576.50 Kg				
7721	Cost of pipe	metre	5.00	12 992.00	64 960.00
2329	Carriage of pipes	100 metre	5.00	1938.30	96.92
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	15.77	55.55	876.02
	TOTAL				65 932.94
	Add for water charges @1% on all except 'A'				650.57
	TOTAL				66 583.51
	Add for contractor's profit and overheads @15%on all execpt'A'				9 856.12
	Cost for 5 metre				76 439.63
	Cost per metre				15 287.93
	Say				15 287.90

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.1 100 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	100mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 15.39 kg				
	Weight of 10m pipes 15.39x10= 153.90 Kg				
7722	Cost of pipe	metre	10.00	597.00	5970.00
2343	Carriage of pipes	100 metre	10.00	116.30	11.63
	Labour for laying				
(A)	Rate same as per item no 18.23 SH : Water Supply	quintal	1.54	55.55	85.55
	TOTAL				6 067.18
	Add for water charges @1% on all except 'A'				59.82
	TOTAL				6 127.00
	Add.for contractor's profit and overheads @15% on all execpt 'A'				906.22
	Cost for 10 metre				7 033.22
	Cost per metre				703.32
	Say				703.30

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.2 150 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	150 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 22.750kg				
	Weight of 10m pipes 22.750x 10 = 227.50 Kg				
7723	Cost of pipe	metre	10.00	870.00	8700.00
2344	Carriage of pipes	100 metre	10.00	193.83	19.38
	Labour for laying				
(A)	Rate same as per item no18.23 SH : Water Supply	quintal	2.28	55.55	126.65
	TOTAL				8846.03
	Add for water charges @1% on all except 'A'				87.19
	TOTAL				8933.22
	Add,for contractor's profit and overheads @15% on all execpt'A'				1320.99
	Cost for 10 metre				10254.21
	Cost per metre				1025.42
	Say				1025.40

18.72 Providing and laying S&S Centrifugally Cast (Spun) /Ductile Iron Pipes conforming to IS : 8329 :

18.72.3 200 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	200 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 30.090 kg				

Code	Description	Unit	Quantity	Rate	Amount
	Weight of 10m pipes 30.090x10 = 300.90 Kg				
7724	Cost of pipe	metre	10.00	1237.00	12 370.00
2345	Carriage of pipes	100 metre	10.00	315.30	31.53
	Labour for laying				
(A)	Rate same as per item 18.23 of SH : Water Supply	quintal	3.01	55.55	167.21
	TOTAL				12 568.74
	Add for water charges @1% on all except 'A'				124.02
	TOTAL				12 692.76
	Add for contractor's profit and overheads @15% on all execpt 'A'				1 878.83
	Cost for 10 metre				14 571.59
	Cost per metre				1 457.16
	Say				1 457.15

18.72 Providing and laying S&S Centrifugally Cast (Spun) /Ductile Iron Pipes conforming to IS : 8329 :

18.72.4 250 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	250mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 39.310kg				
	Weight of 10m pipes 39.310x10 = 393.10 Kg				
7725	Cost of pipe	metre	10.00	1675.00	16 750.00
2346	Carriage of pipes	100 metre	10.00	448.05	44.80
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	3.93	55.55	218.31
	TOTAL				17013.11
	Add for water charges @1% on all except 'A'				167.95
	TOTAL				17 181.06
	Add, for contractor's profit and overheads @15% on all execpt 'A'				2 544.41
	Cost for 10 metre				19 725.47
	Cost per metre				1 972.55
	Say				1 972.55

18.72 Providing and laying S&S Centrifugally Cast (Spun) /Ductile Iron Pipes conforming to IS : 8329 :

18.72.5 300 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	300mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =48.400kg				
	Weight of 10m pipes 48.400x10 = 484.00 Kg				
7726	Cost of pipe	metre	10.00	1 888.00	18 880.00
2347	Carriage of pipes	100 metre	10.00	553.80	55.38
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	4.84	55.55	268.86

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				19 204.24
	Add for water charges @1% on all except 'A'				189.35
	TOTAL				19 393.59
	Add for contractor's profit and overheads @15% on all execpt 'A'				2 868.71
	Cost for 10 metre				22 262.30
	Cost per metre				2 226.23
	Say				2 226.25

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron pipes conforming to IS : 8329 :

18.72.6 350 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	350mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 66.020kg				
	Weight of 10m pipes 66.020x10 = 660.20 Kg				
7727	Cost of pipe	metre	10.00	2 222.00	22 220.00
2348	Carriage of pipes	100 metre	10.00	775.32	77.53
	Labour for laying				
(A)	Rate same as per item no 18.23of SH : Water Supply	quintal	6.60	55.55	366.63
	TOTAL				22 664.16
	Add for water charges @1% on all except 'A'				222.98
	TOTAL				22 887.14
	Add for contractor's profit and overheads @15% on all execpt 'A'				3 378.08
	Cost for 10 metre				26 265.22
	Cost per metre				2 626.52
	Say				2 626.50

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :

18.72..7 400 mm dia Ductile Iron Class K.-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	400mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 10m pipes 78.280x10 = 782.80 Kg				
7728	Cost of pipe	metre	10.00	3 256.00	32 560.00
2349	Carriage of pipes	100 metre	10.00	1 057.26	105.73
	Labour for laying				
(A)	Rate same as per item no18.23 of SH : Water Supply	quintal	7.83	55.55	434.96
	TOTAL				33 100.69
	Add for water charges @1% on all except 'A'				326.66
	TOTAL				33 427.35
	Add for contractor's profit and overheads @ 15% on all execpt 'A'				4 948.86
	Cost for 10 metre				38 376.21
	Cost per metre				3 837.62
	Say				3 837.60

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.8 450 mm dia Ductile Iron Class K.-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	450mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 91.410kg				
	Weight of 10m pipes 91.410x10 = 914.10 Kg				
7729	Cost of pipe	metre	10.00	3 861.00	38 610.00
2350	Carriage of pipes	100 metre	10.00	1 292.20	129.22
	Labour for laying				
(A)	Rate same as per item no.18.23 of SH : Water Supply	quintal	9.14	55.55	507.73
	TOTAL				39 246.95
	Add for water charges @1% on all except 'A'				387.39
	TOTAL				39 634.34
	Add for contractor's profit and overheads @15% on all execpt 'A'				5 868.99
	Cost for 10 metre				45 503.33
	Cost per metre				4 550.33
	Say				4 550.35

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.9 500 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	500mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe = 106.640 kg				
	Weight of 10m pipes 106.640x10 = 1066.40 Kg				
7730	Cost of pipe	metre	10.00	4 557.00	45570.00
2351	Carriage of pipes	100 metre	10.00	1292.20	129.22
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	10.66	55.55	592.16
	TOTAL				46291.38
	Add for water charges @1% on all except 'A'				456.99
	TOTAL				46748.37
	Add for contractor's profit and overheads @15% on allexecpt'A'				6923.43
	Cost for 10 metre				53671.80
	Cost per metre				5367.18
	Say				5367.20

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.10 600 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Materials :- 600mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe=138.610kg Weight of 10m pipes 138.610x10= 1386.10 Kg				
7731	Cost of pipe	metre	10.00	6011.00	60110.00
2352	Carriage of pipes	100 metre	10.00	1938.30	193.83
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	13.86	55.55	769.92
	TOTAL				61073.75
	Add for water charges @1% on all except 'A'				603.04
	TOTAL				61676.79
	Add for contractor's profit and overheads @15%on allexecpt'A'				9136.03
	Cost for 10 metre				70812.82
	Cost per metre				7081.28
	Say				7081.30

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.11 700 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Materials :- 700mm dia. cast iron pipes (in 5.5 m lengths) Weight of 1m pipe=188.920 kg Weight of 10m pipes 188.920x 10 = 1889.20 Kg				
7732	Cost of pipe	metre	10.00	7463.00	74630.00
2353	Carriage of pipes	100metre	10.00	1938.30	193.83
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	18.89	55.55	1049.34 (A)
	TOTAL				75873.17
	Add for water charges @1% on all except 'A'				748.24
	TOTAL				76621.41
	Add for contractor's profit and overheads @15% on all execpt 'A'				11335.81
	Cost for 10 metre				87957.22
	Cost per metre				8795.70
	Say				8795.70

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.12 800 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	800mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 243.510kg				
	Weight of 10m pipes 243.510x10 = 2435.10 Kg				
7733	Cost of pipe	metre	10.00	9 463.00	94 630.00
2355	Carriage of pipes	100 metre	10.00	1938.30	193.83
	Labour for laying				
(A)	Rate same as per item no18.23 SH : Water Supply	quintal	24.35	55.55	1 352.64
	TOTAL				96 176.47
	Add for water charges @1% on all except 'A'				948.24
	TOTAL				97 124.71
	Add for contractor's profit and overheads @15% on all execpt 'A'				14 365.81
	Cost for 10 metre				1,11,490.52
	Cost per metre				11 149.05
	Say				11 149.05

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.13 900 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials:-				
	900 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 282.74 kg				
	Weight of 10m pipes 282.74x10 = 2827.40 Kg				
7734	Cost of pipe	metre	10.00	11 043.00	11 0430.00
2356	Carriage of pipes	100 metre	10.00	2907.45	2 90.74
	Labour for laying				
(A)	Rate same as per item 18.23 of SH : Water Supply	quintal	28.27	55.55	1570.40
	TOTAL				112 291.14
	Add for water charges @ 1 % on all except 'A'				1 107.21
	TOTAL				113 398.35
	Add for contractor's profit and overheads @15%on allexecpt'A'				16 774.19
	Cost for 10 metre				130 172.54
	Cost per metre				13 017.25
	Say				13 017.25

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.14 1000 mm dia Ductile Iron Class K-7 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	1000 mm dia. cast iron pipes (in 5.5 m lengths)				

Code	Description	Unit	Quantity	Rate	Amount
	Weight of 1m pipe= 348.230kg				
	Weight of 10m pipes 348.230x 10 = 3482.30 Kg				
7735	Cost of pipe	metre	10.00	12 436.00	124 360.00
2357	Carriage of pipes	100 metre	10.00	3876.61	387.66
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	34.82	55.55	1934.25
	TOTAL				126 681.91
	Add for water charges @1% on all except 'A'				1 247.48
	TOTAL				127 929.39
	Add for contractor's profit and overheads @15% all execpt'A'				18 899.27
	Cost for 10 metre				146 828.66
	Cost per metre				14 682.87
	Say				14 682.85

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.15 100 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	100mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 17.760Kg				
	Weight of 10m pipes 17.760x 10=177.60 Kg				
7651	Cost of pipe	metre	10.00	658.00	6580.00
2319	Carriage of pipes	100 metre	10.00	116.30	11.63
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	1.776	55.55	98.66
	TOTAL				6690.29
	Add for water charges @1% on all except 'A'				65.92
	TOTAL				6756.21
	Add for contractor's profit and overheads @15% on all execpt 'A'				998.63
	Cost for 10 metre				7754.84
	Cost per metre				775.48
	Say				775.50

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.16 150 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	150 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =26.27Kg				
	Weight of 10m pipes 26.270x10 = 262.70 Kg				
7652	Cost of pipe	metre	10.00	978.00	9780.00
2321	Carriage of pipes	100 metre	10.00	193.83	19.38
	Labour for laying				

Code	Description	Unit	Quantity	Rate	Amount
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	2.627	55.55	145.93
	TOTAL				9945.31
	Add for water charges @1% on all except 'A'				97.99
	TOTAL				10043.30
	Add for contractor's profit and overheads @15%on all execpt'A'				1484.61
	Cost for 10 metre				11527.91
	Cost per metre				1152.79
	Say				1152.80

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.17 200 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	200 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 36.150Kg				
	Weight of 10m pipes 36.150x 10 = 361.50 Kg				
7653	Cost of pipe	metre	10.00	1348.00	13480.00
2322	Carriage of pipes	100 meter	10.00	315.30	31.53
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	3.615	55.55	200.81
	TOTAL				13712.34
	Add for water charges @1% on all except 'A'				135.12
	TOTAL				13847.46
	Add for contractor's profit and overheads @ 15% on all execpt'A'				2047.00
	Cost for 10 metre				15894.46
	Cost per metre				1589.45
	Say				1589.45

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.18 250 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	250mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe = 48.00 Kg				
	Weight of 10m pipes 48.000x10 = 480.00 Kg				
7654	Cost of pipe	metre	10.00	1743.00	17430.00
2323	Carriage of pipes	100 metre	10.00	448.05	44.80
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	4.80	55.55	266.64
	TOTAL				17741.44
	Add for water charges @1% on all except 'A'				174.75
	TOTAL				17916.19
	Add for contractor's profit and overheads @15% on all execpt 'A'				2647.43
	Cost for 10 metre				20563.62
	Cost per metre				2056.36
	Say				2056.35

18.72 Providing and laying S&S Centrifugaily Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.19 300 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	300mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 60.490 Kg				
	Weight of 10m pipes 60.490x10 = 604.90 Kg				
7655	Cost of pipe	metre	10.00	2238.00	22380.00
2324	Carriage of pipes	100 metre	10.00	553.80	55.38
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	6.049	55.55	336.02
	TOTAL				22771.40
	Add for water charges @1% on all except 'A'				224.35
	TOTAL				22995.75
	Add for contractor's profit and overheads @15% on all execpt'A'				3398.96
	Cost for 10 metre				26394.71
	Cost per metre				2639.47
	Say				2639.45

18.72 Providing and laying S&S Centrifugaily Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.20 350 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	350mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe = 79.730 Kg				
	Weight of 10m pipes 79.730x10 = 797.30 Kg				
7656	Cost of pipe	metre	10.00	2 625.00	26 250.00
2325	Carriage of pipes	100 metre	10.00	775.32	77.53
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	7.973	55.55	442.90
	TOTAL				26 770.43
	Add for water charges @1% on all except 'A'				263.28
	TOTAL				27 033.71
	Add for contractor's profit and overheads @15% on all execpt 'A'				3 988.62
	Cost for 10 metre				31 022.33
	Cost per metre				3 102.23
	Say				3 102.25

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329:

18.72.21 400 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	400mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =94.800 Kg				
	Weight of 10m pipes 94.800x10 = 948.00 Kg				

Code	Description	Unit	Quantity	Rate	Amount
7657	Cost of pipe	metre	10.00	3 763.00	37 630.00
2326	Carriage of pipes	100 metre	10.00	1 057.26	105.73
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	9.48	55.55	526.61
	TOTAL				38 262.34
	Add for water charges @1% on all except 'A'				377.36
	TOTAL				38 639.70
	Add for contractor's profit and overheads @15% on all execpt 'A'				5 716.96
	Cost for 10 metre				44 356.66
	Cost per metre				4 435.67
	Say				4 435.65

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :

18.72.22 450 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	450mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 110.970Kg				
	Weight of 10m pipes 110.970x 10 = 1109.70 Kg				
7658	Cost of pipe	metre	10.00	4 175.00	41 750.00
2327	Carriage of pipes	100 metre	10.00	1 292.20	129.22
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	11.097	55.55	616.44
	TOTAL				42 495.66
	Add for water charges @1% on all except 'A'				418.79
	TOTAL				42 914.45
	Add for contractor's profit and overheads @15% on all execpt 'A'				6 344.70
	Cost for 10 metre				49 259.15
	Cost per metre				4 925.92
	Say				4 925.90

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.23 500 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	500mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =129.480Kg				
	Weight of 10m pipes 129.480x10= 1294.80 Kg				
7659	Cost of pipe	metre	10.00	5600.00	56.000.00
2328	Carriage of pipes	100 metre	10.00	1292.20	129.22
	Labour for laying				
(A)	Rate same as per item no18.23 of SH : Water Supply	quintal	12.948	55.55	719.26
	TOTAL				56848.48
	Add for water charges @1% on all except 'A'				561.29
	TOTAL				57409.77
	Add for contractor's profit and overheads @ 15% on all execpt 'A'				8503.58
	Cost for 10 metre				65913.35
	Cost per metre				6591.34
	Say				6591.35

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.24 600 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials:-				
	600mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 168.680 Kg				
	Weight of 10m pipes 168.680x10= 1686.80 Kg				
7660	Cost of pipe	metre	10.00	6275.00	62750.00
2329	Carriage of pipes	100 metre	10.00	1938.30	193.83
	Labour for laying				
(A)	Rate same as per item no.18.23 of SH : Water Supply	quintal	16.868	55.55	937.02 (A)
	TOTAL				63880.85
	Add for water charges @1% on all except 'A'				629.44
	TOTAL				64510.29
	Add for contractor's profit and overheads @15% on all execpt 'A'				9535.99
	Cost for 10 metre				74046.28
	Cost per metre				7404.63
	Say				7404.65

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.25 700 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	700mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe= 217.540 Kg				
	Weight of 10m pipes 217.540x10 = 2175.40 Kg				
7661	Cost of pipe	metre	10.00	8538.00	85380.00
2330	Carriage of pipes	100 metre	10.00	1292.20	129.22
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	21.754	55.55	1208.43
	TOTAL				86717.65
	Add for water charges @1% on all except 'A'				855.09
	TOTAL				87572.74
	Add for contractor's profit and overheads @15% on all execpt 'A'				12954.65
	Cost for 10 metre				100527.39
	Cost per metre				10052.74
	Say				10052.75

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :

18.72.26 750 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	750mm dia. cast iron pipes (in 5.5 m lengths)				
	Wt. of 1 m pipe = 242.60 Kg.				
	Weight of 10m pipes 242.60x10 = 2426.00 Kg				
7662	Cost of pipe	metre	10.00	9725.00	97250.00
2331	Carriage of pipes	100 metre	10.00	2907.45	290.74
	Labour for laying				

Code	Description	Unit	Quantity	Rate	Amount
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	24.26	55.55	1347.64
	TOTAL				98888.38
	Add for water charges @1% on all except 'A'				975.41
	TOTAL				99863.79
	Add for contractor's profit and overheads @15% on all execpt 'A'				14777.42
	Cost for 10 metre				114641.21
	Cost per metre				11464.12
	Say				11464.10

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.27 800 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	800 mm dia. cast iron pfpes (in 5.5 m lengths)				
	Weight of 1m pipe= 267.100 Kg				
	Weight of 10m pipes 267.100x10 = 2671.00 Kg				
7663	Cost of pipe	metre	10.00	10 00.00	100 000.00
2332	Carriage of pipes	100 metre	10.00	3876.61	387.66
	Labour for laying				
	Rate same as per item no 18.23 of SH : Water Supply	quintal	26.71	55.55	1483.74
	TOTAL				101871.40
	Add for water charges @1% on all except 'A'				1003.88
	TOTAL				102875.28
	Add for contractor's profit and overheads @15% on all execpt 'A'				15208.73
	Cost for 10 metre				118084.01
	Cost per metre				11808.40
	Say				11808.40

18.72 Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329

18.72.28 900 mm dia Ductile Iron Class K-9 pipes

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Materials :-				
	900 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe =321.290 Kg				
	Weight of 10m pipes 321.290x10 = 3212.90 Kg				
7664	Cost of pipe	metre	10.00	11663.00	116630.00
2333	Carriage of pipes	100 metre	10.00	3876.61	387.66
	Labour for laying				
	Rate same as per item no18.23 of SH : Water Supply	quintal	32.129	55.55	1784.77
	TOTAL				118802.43
	Add for water charges @1% on all except 'A'				1170.18
	TOTAL				119972.61
	Add for contractor's profit and overheads @15% on all execpt'A'				17728.18
	Cost for 10 metre				137700.79
	Cost per metre				13770.08
	Say				13770.10

18.72 Providing and laying S&S Centrifiigally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :

18.72.29 1000 mm dia Ductile Iron Class K-9 pipes.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	Materials :-				
	1000 mm dia. cast iron pipes (in 5.5 m lengths)				
	Weight of 1m pipe = 380.190 kg				
	Weight of 10m pipes 380.190x10 = 3801.90 Kg				
7665	Cost of pipe	metre	10.00	13125.00	131250.00
2334	Carriage of pipes	100 metre	10.00	3876.61	387.66
	Labour for laying				
(A)	Rate same as per item no 18.23 of SH : Water Supply	quintal	38.019	55.55	2111.96
	TOTAL				133749.62
	Add for water charges @1% on all except 'A'				1316.38
	TOTAL				135066.91
	Add for contractor's profit and overheads @ 15% onall execpt'A'				19943.11
	Cost for 10 metre				155009.91
	Cost per metre				15500.91
	Say				15500.90

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K 9 conforming to IS : 8329 :

18.73.1 100 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	100 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe = 21.700 kg				
	Weight of 10m pipes 21.700x5 = 108.50 Kg				
7686	Cost of pipe	metre	5.00	1888.00	9440.00
2319	Carriage of pipes	100 metre	5.00	116.30	5.82
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	1.09	55.55	60.55
	TOTAL				9506.37
	Add for water charges @1% on all except 'A'				94.46
	TOTAL				9600.83
	Add for contractor's profit and overheads @ 15% onall execpt'A'				1431.04
	Cost for 5 metre				11031.87
	Cost per metre				2206.37
	Say				2206.35

18.73 Providing and laying Double Flanged (Screwed/Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K-9 conforming to IS : 8329

18.73.2 150 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	150 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe = 32.600 kg				
	Weight of 5m pipes32.600x5 = 163.00Kg				
7687	Cost of pipe	metre	5.00	2613.00	13065.00
2321	Carriage of pipes	100 metre	5.00	193.83	9.69
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	1.63	55.55	90.55
	TOTAL				13165.24
	Add for water charges @1% on all except 'A'				130.75
	TOTAL				13295.99
	Add for contractor's profit and overheads @ 15% onall execpt'A'				1980.82
	Cost for 5 metre				15276.81
	Cost per metre				3055.36
	Say				3055.35

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.3 200 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	200mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe = 44.200 kg				
	Weight of 5m pipes44.200x5 =221.00Kg				
7688	Cost of pipe	metre	5.00	3388.00	16940.00
2322	Carriage of pipes	100 metre	5.00	315.30	15.76
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	2.21	55.55	122.77
	TOTAL				17078.53
	Add for water charges @1% on all except 'A'				169.56
	TOTAL				17248.09
	Add for contractor's profit and overheads @ 15% onall execpt'A'				2568.80
	Cost for 5 metre				19816.89
	Cost per metre				3963.38
	Say				3963.40

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.4 250 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	250 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =59.400kg				
	Weight of 5m pipes 59.400x5 = 297.00Kg				
7689	Cost of pipe	metre	5.00	4498.00	22490.00
2323	Carriage of pipes	100 metre	5.00	448.05	22.40
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	2.97	55.55	164.98
	TOTAL				22677.38
	Add for water charges @1% on all except 'A'				225.12
	TOTAL				22902.50
	Add for contractor's profit and overheads @ 15% onall execpt'A'				3410.63
	Cost for 5 metre				26313.13
	Cost per metre				5262.63
	Say				5262.65

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K. - 9 conforming to IS : 8329 :

18.73.5 300 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	300 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =76.400kg				
	Weight of 5m pipes 76.400x5 = 382.00Kg				
7690	Cost of pipe	metre	5.00	5788.00	28940.00
2324	Carriage of pipes	100 metre	5.00	553.80	27.69
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	3.82	55.55	212.20
	TOTAL				29179.89
	Add for water charges @1% on all except 'A'				289.68
	TOTAL				29469.57
	Add for contractor's profit and overheads @ 15% onall execpt'A'				4388.61
	Cost for 5 metre				33858.18
	Cost per metre				6771.64
	Say				6771.65

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.6 350 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	350 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =91.400kg				
	Weight of 5m pipes 91.400x5 = 457.00Kg				
7691	Cost of pipe	metre	5.00	7210.00	36050.00
2325	Carriage of pipes	100 metre	5.00	775.32	38.77
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	4.57	55.55	253.86
	TOTAL				36342.63
	Add for water charges @1% on all except 'A'				360.89
	TOTAL				36703.52
	Add for contractor's profit and overheads @ 15% onall execpt'A'				5467.45
	Cost for 5 metre				42170.97
	Cost per metre				8434.19
	Say				8434.20

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.7 400 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	400 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =108.100kg				
	Weight of 5m pipes 108.100x5 = 540.50Kg				
7692	Cost of pipe	metre	5.00	8613.00	43065.00
2326	Carriage of pipes	100 metre	5.00	1057.26	52.86
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	5.40	55.55	299.97
	TOTAL				43417.83
	Add for water charges @1% on all except 'A'				431.18
	TOTAL				43849.01
	Add for contractor's profit and overheads @ 15% onall execpt'A'				6532.36
	Cost for 5 metre				50381.37
	Cost per metre				10076.27
	Say				10076.25

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.8 450 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	450 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =127.800kg				
	Weight of 5m pipes 127.800x5 = 639.00Kg				
7693	Cost of pipe	metre	5.00	10413.00	52065.00
2327	Carriage of pipes	100 metre	5.00	1292.20	64.61
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	6.39	55.55	354.96
	TOTAL				52484.57
	Add for water charges @1% on all except 'A'				521.30
	TOTAL				53005.87
	Add for contractor's profit and overheads @ 15% on all execpt'A'				7897.64
	Cost for 5 metre				60903.51
	Cost per metre				12180.70
	Say				12180.70

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :

18.73.9 500 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	500 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =147.900kg				
	Weight of 5m pipes 147.900x5 = 739.50Kg				
7694	Cost of pipe	metre	5.00	12625.00	63125.00
2328	Carriage of pipes	100 metre	5.00	1292.20	64.61
	Labour for laying				
(A)	For laying Rate same as per item no 18.23 of SH : Water Supply	quintal	7.40	55.55	411.07(A)
	TOTAL				63600.68
	Add for water charges @1% on all except 'A'				631.90
	TOTAL				64232.58
	Add for contractor's profit and overheads @ 15% onall execpt'A'				9573.23
	Cost for 5 metre				73805.81
	Cost per metre				14767.16
	Say				14761.20

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :
18.73.10 600 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	600 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =198.900kg				
	Weight of 5m pipes 198.900x5 = 994.50Kg				
7695	Cost of pipe	metre	5.00	17125.00	85625.00
2329	Carriage of pipes	100 metre	5.00	1938.30	96.92
	Labour for laying				
(A)	Rate same as per item no 18.23 of	quintal	9.95	55.55	552.72
	SH : Water Supply				
	TOTAL				86274.64
	Add for water charges @1% on all except 'A'				857.22
	TOTAL				87131.86
	Add for contractor's profit and overheads				12986.87
	@ 15% on all execpt'A'				
	Cost for 5 metre				100118.73
	Cost per metre				20023.75
	Say				20023.70

18.73 Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :
18.73.11 700 mm dia Ductile Iron Double Flanged

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 5 metre				
	Materials :-				
	700 mm dia. ductile iron pipes double flanged				
	Weight of 1m pipe =254.90 kg				
	Weight of 5m pipes 254.90x5 = 1274.50 Kg				
7696	Cost of pipe	metre	5.00	21125.00	105625.00
2330	Carriage of pipes	100 metre	5.00	1292.20	64.61
	Labour for laying				
(A)	Rate same as per item no 18.23 of	quintal	12.75	55.55	708.26
	SH : Water Supply				
	TOTAL				106397.87
	Add for water charges @1% on all except 'A'				1056.90
	TOTAL				107454.77
	Add for contractor's profit and overheads				16011.98
	@ 15% onall execpt'A'				
	Cost for 5 metre				123466.75
	Cost per metre				24693.35
	Say				24693.40

18.74 Providing and fixing unplastisised P.V.C. connection pipe with PTMT Nuts of approved quality and colour.

18.74.1 15 mm nominal bore with 30cm length.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7862	15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts	each	1.00	27.00	27.00
9999	Carriage of materials and fixing charges	L.S.	12.22	1.00	12.22
	TOTAL				39.22
	Add 1 % for water charges				0.39
	TOTAL				39.61
	Add 15% for contractor's profit and overheads				5.94
	Cost of one no				45.55
	Say				45.55

18.74 Providing and fixing unplastisised P.V.C. connection pipe with PTMT Nuts of approved quality and colour.

18.74.2 15 mm nominal bore with 45 cm length.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7863	15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts	each	1.00	32.00	32.00
9999	Carriage of materials and fixing charges	L.S.	13.52	1.00	13.52
	TOTAL				45.52
	Add 1 % for water charges				0.46
	TOTAL				45.98
	Add 15% for contractor's profit and overheads				6.90
	Cost of one no				52.88
	Say				52.90

18.75 Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.

18.75.1 15 mm nominal bore. Weighing not less than 32gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7864	P.T.M.T extension nipple 15mm	each	1.00	30.00	30.00
9999	Carriage of materials and fixing charges	L.S.	3.38	1.00	3.38
	TOTAL				33.38
	Add 1 % for water charges				0.33
	TOTAL				33.71
	Add 15% for contractor's profit and overheads				5.06
	Cost of one no				38.77
	Say				38.75

18.75 Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.

18.75.2 20mm nominal bore. Weighing not less than 40gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7865	P.T.M.T extension nipple 20mm	each	1.00	36.00	36.00
9999	Carriage of materials and fixing charges	L.S.	3.38	1.00	3.38
	TOTAL				39.38

Code	Description	Unit	Quantity	Rate	Amount
	Add 1 % for water charges				0.39
	TOTAL				39.77
	Add 15% for contractor's profit and overheads				5.97
	Cost of one no				45.74
	Say				45.75

18.75 Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.

18.75.3 25mm nominal bore. Weighing not less than 62gms.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no				
	Materials :				
7866	P.T.M.T extension nipple 25mm	each	1.00	54.00	54.00
9999	Carriage of materials and fixing charges	L.S.	3.38	1.00	3.38
	TOTAL				57.38
	Add 1 % for water charges				0.57
	TOTAL				57.95
	Add 15% for contractor's profit and overheads				8.69
	Cost of one no				66.64
	Say				66.65

18.76 Cutting holes upto 30x30 cm in walls including making good the same :

18.76.1 With F.P.S. bricks.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 holes				
	Size 30x30 cm in 34 cm wall				
	Labour for cutting holes				
0123	**(A)** Mason 1st class	Day	0.16	151.50	24.24
0124	**(A)** Mason 2nd class	Day	0.16	141.60	22.66
0114	**(A)** Beldar	Day	1.25	135.25	169.06
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	10x0.30x0.30x0.344m = 0.309 cum				
	Les 33% for pipe etc. = (-) 0.102 cum				
	= 0.207 cum Say 0.21 cum				
	(Rate as per item No 6.4.1 of SH :- Brick work.)	cum	0.21	2601.90	546.40
	12 mm cement plaster 1:4 (1 cement: 4 coarse sand)				
	10x2x0.3x0.3m = 1.80 sqm				
	Les 33% for pipe etc. = (-) 0.59 sqm				
	= 1.21 sqm Say 1.20 sqm				
	(Rate as per item no 13.4.1 of SH : Finishing)	sqm	1.20	82.55	99.06
9999	**(B)** Add for delay	L.S.	16.12	1.00	16.12
9999	**(B)** Sundries	L.S.	8.06	1.00	8.06
	TOTAL				885.60
(C)	Add 1% for water charges on (A+B)				2.40
	TOTAL				888.00
	Add 15% for contractor's profit and overheads on (A+B+C)				36.38
	Cost for 10 holes				924.38
	Cost for 1 hole				92.44
	Say				92.45

18.77 Cutting holes upto 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 holes				
	Average size 15x15x15 cm				
	Labour for cutting holes				
0123	**(A)** Mason 1st class	Day	0.83	151.00	125.75
0124	**(A)** Mason 2nd class	Day	0.83	141.60	117.53
0114	**(A)** Beldar	Day	1.67	135.25	225.87
	Cement concrete 1:2:4 (1 cement: 2 coarse sand ; 4 graded stone aggregate 20 mm nominal size)				
	10x0.15x0.15x0.15 m = 0.033 cum				
	Les 33% for pipe etc. = (-) 0.011 cum				
	= 0.022 cum Say 0.0.02 cum				
	(Rate as per item no 4.1.3 SH : Concrete work)	cum	0.02	3257.45	65.15
9999	**(B)** Finishing top and bottom and making the holes leak proof	L.S.	121.16	1.00	121.16
9999	**(B)** Add for delay	L.S.	40.30	1.00	40.30
9999	**(B)** Sundries	L.S.	21.58	1.00	21.58
	TOTAL				717.33
(C)	Add 1 % for water charges on (A+B)				6.52
	TOTAL				723.85
	Add 15% for contractor's profit and overheads on (A+B+C)				98.80
	Cost for 10 holes				822.65
	Cost for 1 hole				82.27
	Say				82.25

18.78 Making chases upto 7.5x7.5 cm in wails including making good and finishing with matching surface after housing G.I. pipe etc.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	Labour for making chases				
0123	**(A)** Mason 1st class	Day	0.25	151.50	37.88
0124	**(A)** Mason 2nd class	Day	0.25	141.00	35.40
0114	**(A)** Beldar	Day	1.00	135.25	135.25
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.075x0.075x10 m = 0.05625 cum				
	Les 33% for pipe etc. = (-) 0.01856 cum				
	= 0.03769 cum Say 0.04 cum				
	(Rate as per item no 4.2.5 SH : Concrete work)	cum	0.04	3112.70	124.51
	TOTAL				333.04
(B)	Add 1 % for water charges on (A)				2.09 (B)
	TOTAL				335.13
	Add 15% for contractor's profit and overheads on (A+B)				31.59
	Cost for 10 metre				366.72
	Cost for 1 metre				36.67
	Say				36.65

18.79 Making hole upto 20x20 cm and embedding pipes upto 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) including disposal of malba.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.2x0.2x10 m = 0.40 cum	cum	0.22	3112.70	684.79
	Less for pipe π x$(0.15)^2$/4x10m=0.177 cum = 0.223 cum Say 0.22 cum				
	(Rate as per item no 4.2.5 SH : Concrete work)				
9999	**(A)** Disposal of malba	L.S.	13.52	1.00	13.52
	TOTAL				698.31
(B)	Add 1% for water charges on (A)				0.14
	TOTAL				698.31
	Add 15% for contractor's profit and overheads on (A+B)				2.05
	Cost for 10 metre				700.50
	Cost for 1 metre				70.05
	Say				70.05

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.1 80mm diametre C.I, pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x3.1416/4x$(80/10)^2$ x(100x100)/1000x0.5 gms.				
1301	= 754.28 gms Say 0.008 q	quintal	0.008	1550.00	12.40
	LABOUR				
0116	Fitter	Day	0.33	151.50	50.00
0114	Beldar	Day	1.31	135.25	177.18
9999	Sundries including testing of samples	L.S.	9.88	1.00	9.88
	TOTAL				249.46
	Add 1% for water charges				2.49
	TOTAL				251.95
	Add 15% for contractor's profit and overheads				37.79
	Cost for 100 metre				289.74
	Say				289.75

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.2 100 mm dia metre C.I.pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				

Code	Description	Unit	Quantity	Rate	Amount
	Bleaching powder				
	3x(3.1416/4)x(100/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 1178.57 gms Say 0.012 q	quintal	0.012	1550.00	18.60
	LABOUR				
0116	Fitter	Day	0.49	151.50	74.24
0114	Beldar	Day	1.64	135.25	221.81
9999	Sundries including testing of samples	L.S.	13.52	1.00	13.52
	TOTAL				328.17
	Add 1% for water charges				3.28
	TOTAL				331.45
	Add 15% for contractor's profit and overheads				49.72
	Cost for 100 metre				381.17
	Say				381.15

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.3 125 mm diametre C.I, pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(125/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 1841.52 gms Say 0.008 q	quintal	0.018	1550.00	27.90
	LABOUR				
0116	Fitter	Day	0.66	151.50	99.99
0114	Beldar	Day	1.97	135.25	266.44
9999	Sundries including testing of samples	L.S.	17.94	1.00	17.94
	TOTAL				412.27
	Add 1% for water charges				4.12
	TOTAL				416.39
	Add 15% for contractor's profit and overheads				62.46
	Cost for 100 metre				478.85
	Say				478.85

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.4 150mm dia metre C.I,pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(150/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 2651 gms Say 0.027 q	quintal	0.027	1550.00	41.85
	LABOUR				
0116	Fitter	Day	0.82	151.50	124.23
0114	Beldar	Day	2.30	135.25	311.08
9999	Sundries including testing of samples	L.S.	22.88	1.00	22.88
	TOTAL				500.04
	Add 1% for water charges				5.00
	TOTAL				505.04
	Add 15% for contractor's profit and overheads				75.76
	Cost for 100 metre				580.80
	Say				580.80

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.5 200mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(200/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 4712.39 gms Say 0.047 q	quintal	0.047	1550.00	72.85
	LABOUR				
0116	Fitter	Day	1.15	151.50	174.22
0114	Beldar	Day	2.95	135.25	398.99
9999	Sundries including testing of samples	L.S.	31.46	1.00	31.46
	TOTAL				677.52
	Add 1% for water charges				6.78
	TOTAL				684.30
	Add 15% for contractor's profit and overheads				102.64
	Cost for 100 metre				786.94
	Say				786.95

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.6 250 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(250/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 7363.10 gms Say 0.074 q	quintal	0.074	1550.00	114.70
	LABOUR				
0116	Fitter	Day	1.48	151.50	224.22
0114	Beldar	Day	3.61	135.25	488.25
9999	Sundries including testing of samples	L.S.	40.30	1.00	40.30
	TOTAL				867.47
	Add 1% for water charges				8.67
	TOTAL				876.14
	Add 15% for contractor's profit and overheads				131.42
	Cost for 100 metre				1007.56
	Say				1007.55

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.7 300 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(300/10)^2 x(100x100)/1000x0.5 gms.				

Code	Description	Unit	Quantity	Rate	Amount
1301	= 10602.88 gms Say 0.106 q	quintal	0.106	1550.00	164.30
	LABOUR				
0116	Fitter	Day	1.64	151.50	248.46
0114	Beldar	Day	3.94	135.25	532.88
9999	Sundries including testing of samples	L.S.	44.46	1.00	44.46
	TOTAL				990.10
	Add 1% for water charges				9.90
	TOTAL				1000.00
	Add 15% for contractor's profit and overheads				150.00
	Cost for 100 metre				1150.00
	Say				1150.00

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.8 350 mm diametre C.I, pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3x(3.1416/4)x(350/10)^2$ x(100x100)/1000x0.5 gms.				
1301	= 14431.70 gms Say 0.144 q	quintal	0.144	1550.00	223.20
	LABOUR				
0116	Fitter	Day	1.80	151.50	272.70
0114	Beldar	Day	4.27	135.25	577.52
9999	Sundries including testing of samples	L.S.	48.36	1.00	48.36
	TOTAL				1121.78
	Add 1% for water charges				11.22
	TOTAL				1133.00
	Add 15% for contractor's profit and overheads				169.95
	Cost for 100 metre				1302.95
	Say				1302.95

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.9 400 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	$3x(3.1416/4)x(400/10)^2$ x(100x100)/1000x0.5 gms.				
1301	= 18849.60 gms Say 0.189 q	quintal	0.189	1550.00	292.95
	LABOUR				
0116	Fitter	Day	1.97	151.50	298.46
0114	Beldar	Day	4.59	135.25	620.80
9999	Sundries including testing of samples	L.S.	53.82	1.00	53.82
	TOTAL				1266.03
	Add 1% for water charges				12.66
	TOTAL				1278.69
	Add 15% for contractor's profit and overheads				191.80
	Cost for 100 metre				1470.49
	Say				1470.50

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including gettingjhe sample of water from the disinfected main tested in the municipal laboratory :

18.80.10 450 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(450/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 23856.50 gms Say 0.239 q	quintal	0.239	1550.00	370.45
	LABOUR				
0116	Fitter	Day	2.13	151.50	322.45
0114	Beldar	Day	4.92	135.25	655.43
9999	Sundries including testing of samples	L.S.	58.24	1.00	58.24
	TOTAL				1416.82
	Add 1% for water charges				14.17
	TOTAL				1430.99
	Add 15% for contractor's profit and overheads				214.65
	Cost for 100 metre				1645.64
	Say				1645.65

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.11 500 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder				
	3x(3.1416/4)x(500/10)^2 x(100x100)/1000x0.5 gms.				
1301	= 29452.40 gms Say 0.295 q	quintal	0.295	1550.00	457.25
	LABOUR				
0116	Fitter	Day	2.3	151.50	348.45
0114	Beldar	Day	5.25	135.25	710.06
9999	Sundries including testing of samples	L.S.	63.70	1.00	63.70
	TOTAL				1579.46
	Add 1% for water charges				15.79
	TOTAL				1595.25
	Add 15% for contractor's profit and overheads				239.29
	Cost for 100 metre				1834.54
	Say				1834.55

18.80 Disinfecting C.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :

18.80.12 600 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
	Bleaching powder 3x (3.1416/4)x(600/10)^{2}x (100x100)/100x0.5gms				
1301	= 42411.5 gms Say 0.424 q	quintal	0.424	1550.00	657.20
	LABOUR				
0116	Fitter	Day	2.62	151.50	396.93
0114	Beldar	Day	5.91	135.25	799.33
9999	Sundries including testing of samples	L.S.	71.37	1.00	71.37
	TOTAL				1924.83
	Add 1 % for water charges				19.25
	TOTAL				1944.08
	Add 1 Wo for contractor's profit and overheads				291.61
	Cost for 100 metre				2235.69
	Say				2235.70

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.1 80 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.003	1550.00	4.65
0116	Fitter	Day	0.11	151.50	16.66
0114	Beldar	Day	0.49	135.25	66.27
9999	Sundries including testing of samples	L.S.	4.42	1.00	4.42
	TOTAL				92.00
	Add 1 % for water charges				0.92
	TOTAL				92.92
	Add 15%for contractor's profit and overheads				13.94
	Cost for 100 metre				106.86
	Say				106.85

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.2 100mm diametreC.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.004	1550.00	6.20
0116	Fitter	Day	0.16	151.50	24.24

Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	0.57	135.25	77.09
9999	Sundries including testing of samples	L.S.	4.42	1.00	4.42
	TOTAL				111.95
	Add 1 % for water charges				1.12
	TOTAL				113.07
	Add 15% or contractor's profit and overheads				16.96
	Cost for 100 metre				130.03
	Say				130.05

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory:

18.81.3 125mm dia metre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.006	1550.00	9.30
0116	Fitter	Day	0.22	151.50	33.33
0114	Beldar	Day	0.66	135.25	89.26
9999	Sundries including testing of samples	L.S.	5.46	1.00	5.46
	TOTAL				137.35
	Add 1% for water charges				1.37
	TOTAL				138.72
	Add 15% for contractor's profit and overheads				20.81
	Cost for 100 metre				159.53
	Say				159.55

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.4 150 mm dia metre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.009	1550.00	13.95
0116	Fitter	Day	0.27	151.50	40.90
0114	Beldar	Day	0.74	135.25	100.08
9999	Sundries including testing of samples	L.S.	7.15	1.00	7.15
	TOTAL				162.08
	Add 1% for water charges				1.62
	TOTAL				163.70
	Add 15% for contractor's profit and overheads				24.56
	Cost for 100 metre				188.26
	Say				188.25

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.5 200 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.016	1550.00	24.80
0 116	Fitter	Day	0.58	151.50	87.87
0114	Beldar	Day	0.90	135.25	121.72
9999	Sundries including testing of samples	L.S.	9.88	1.00	9.88
	TOTAL				244.27
	Add 1% for water charges				2.44
	TOTAL				246.71
	Add 15% for contractor's profit and overheads				37.01
	Cost for 100 metre				283.72
	Say				283.70

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory:

18.81.6 250 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.025	1550.00	38.75
116	Fitter	Day	0.60	151.50	90.90
114	Beldar	Day	1.10	135.25	148.78
9999	Sundries including testing of samples	L.S.	10.79	1.00	10.79
	TOTAL				289.22
	Add 1% for water charges				2.89
	TOTAL				292.11
	Add 15% for contractor's profit and overheads				43.82
	Cost for 100 metre				335.93
	Say				335.95

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.7 300 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.035	1550.00	54.25
0116	Fitter	Day	0.60	151.50	90.90
0114	Beldar	Day	1.30	135.25	175.82
9999	Sundries including testing of samples	L.S.	13.52	1.00	13.52
	TOTAL				334.49

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				3.34
	TOTAL				337.83
	Add 15% for contractor's profit and overheads				50.67
	Cost for 100 metre				388.50
	Say				388.50

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.8 350 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.048	1550.00	74.40
0116	Fitter	Day	0.70	151.50	106.05
0114	Beldar	Day	1.50	135.25	202.88
9999	Sundries including testing of samples	L.S.	16.12	1.00	16.12
	TOTAL				399.45
	Add 1% for water charges				3.99
	TOTAL				403.44
	Add 15% for contractor's profit and overheads				60.52
	Cost for 100 metre				463.96
	Say				463.95

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.9 400 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.063	1550.00	97.65
0116	Fitter	Day	0.80	151.50	121.20
0114	Beldar	Day	1.70	135.25	229.92
9999	Sundries including testing of samples	L.S.	17.94	1.00	17.94
	TOTAL				466.71
	Add 1% for water charges				4.67
	TOTAL				471.38
	Add 15% for contractor's profit and overheads				70.71
	Cost for 100 metre				542.09
	Say				542.10

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory:

18.81.10 450 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.08	1550.00	124.00
0116	Fitter	Day	0.90	151.50	136.35
0114	Beldar	Day	1.90	135.25	256.97
9999	Sundries including testing of samples	L.S.	20.67	1.00	20.67
	TOTAL				537.99
	Add 1 % for water charges				5.38
	TOTAL				543.37
	Add 15% for contractor's profit and overheads				81.51
	Cost for 100 metre				624.88
	Say				624.90

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory:

18.81.11 500 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.098	1550.00	151.90
0116	Fitter	Day	1.00	151.50	151.50
0114	Beldar	Day	2.10	135.25	284.03
9999	Sundries including testing of samples	L.S.	23.27	1.00	23.27
	TOTAL				610.70
	Add 1 % for water charges				6.11
	TOTAL				616.81
	Add 15% for contractor's profit and overheads				92.52
	Cost for 100 metre				709.33
	Say				709.35

18.81 Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :

18.81.12 600 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
1301	Bleaching powder	quintal	0.141	1550.00	218.55
0116	Fitter	Day	1.20	151.50	181.80
0114	Beldar	Day	2.50	135.25	338.12
9999	Sundries including testing of samples	L.S.	26.00	1.00	26.00
	TOTAL				764.47
	Add 1 % for water charges				7.64
	TOTAL				772.11
	Add 15%for contractor's profit and overheads				115.82
	Cost for 100 metre				887.93
	Say				887.95

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.1 80 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 40.26 m or 11 nos. joints. Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m= 16.61 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}x(0.098)^2m$ = (-)0.30 cum . total=16.31cum				
	(Rate as per item no. 2.8.1)	cum	16.31	103.40	1686.45
	{Rate as per item no. 2.25)	cum	16.31	45.70	745.37 (A)
	Breaking lead caulked joints' making blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	0.373	265.00	98.84
0771	Kerosene oil	litre	0.379	19.00	7.20
	LABOUR				
0117	Assistant Filter	Day	0.50	141.60	70.80
0114	Beldar	Day	4.00	135.25	541.00
9999	Sundries and carriage	L.S.	53.82	1.00	53.82
	TOTAL				3203.48
	Add 1 % for water charges except on 'A'				7.72
	TOTAL				3211.20
	Add 15% for contractor's profit and overheads except on 'A'				116.91
	Cost for 40.26 metre				3328.11
	Cost for one metre				82.67
	Say				82.65

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.2 100mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40:26 m or 11 nos. joints. Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x55x0.75 m=16.61 cum				
	Deduct for pipe $1x40.26x\frac{3.141`6}{4}x(0.098)^2m$ = (-)0.44				
	(Rate as per item no. 2.8.1 of S.H. Earth work)	cum	16.17	103.40	1671.98(A)
	late as per item no.2.25of S.H. Earth work)	cum	16.17	45.70	738.97(A)
	Breaking lead caulked joints,making blockst and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	0.466	265.00	123.49
0771	Kerosene oil	litre	0.379	19.00	7.20
	LABOUR				
0117	Assistant Filter	Day	0.63	141.60	89.21
0114	Beldar	Day	4.50	135.25	608.62

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries and carriage	L.S.	53.82	1.00	53.82
	TOTAL				3293.29
	Add 1% for water charges except on 'A'				8.82
	TOTAL				3302.11
	Add 15% for contractor's profit and overheads except on 'A'				133.67
	Cost for 40.26 metre				3435.78
	Cost for one metre				85.34
	Say				85.35

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead uptoJJO metre :

18.82.3 125 mm diametre C.I, pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints.				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth				
	1x40.26x55x0.75 m= 16.61 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}x(0.144)^2$ =(-) 0.65cum total=15.96cum				
	(A)(Rate as per item no. 2.8.1)	cum	15.96	103.40	650.26
	(A)(Rate as per item no.2.25)	cum	15.96	45.70	729.37
	Breaking lead caulked joints,and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	0.559	265.00	148.14
0771	Kerosene oil	litre	0.568	19.00	10.79
	LABOUR				
0117	Assistant Filter	Day	0.75	141.60	106.20
0114	Beldar	Day	5.00	135.25	676.25
9999	Sundries and carriage	L.S.	53.82	1.00	53.82
	TOTAL				3 374.83
	Add 1% for water charges except on 'A'				9.95
	TOTAL				3 384.78
	Add 15% for contractor's profit and overheads except on 'A'				150.77
	Cost for 40.26 metre				3 535.55
	Cost for one metre				87.82
	Say				87.80

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.4 150mm dia metre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints.				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth				
	1x40.26x55x0.75 m= 16.61 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{}$ x $(0.17)^2$ =(-) 0.91 cum				
	Total Qty=16.61-0.91=15.70 cum				

Code	Description	Unit	Quantity	Rate	Amount
	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	15.7	103.40	1623.38(A)
	(Rate as per item no. 2.25 S.H.. Earth work)	cum	15.7	45.70	717.49(A)
	Breaking lead caulked joints,making blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	0.653	265.00	173.04
771	Kerosene oil	litre	0.568	19.00	10.79
	LABOUR				
117	Assistant Filter	Day	0.887	141.60	124.61
0114	Beldar	Day	5.50	135.25	743.88
9999	Sundries and carriage	L.S.	67.21	1.00	67.21
	TOTAL				3 460.40
	Add 1 % for water charges except on 'A'				11.20
	TOTAL				3 471.60
	Add 14E% for contractor's profit and overheads excepfon 'A'				169.61
	Cost for 40.26 metre				3 641.21
	Cost for one metre				90.44
	Say				90.45

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.5 200 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints.				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth				
	1x40.26x60x0.75 m=18.12 cum = 16.56 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4} x (0.222)^2$				
	(-) 1.56cum Total=16.56cum				
	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	16.56	103.40	1712.30(A)
	as per item no.2.25 of S.H. Earth work)	cum	16.56	45.70	756.79(A)
	Breaking lead caulked joints making block and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	0.84	265.00	222.60
0771	Kerosene oil	litre	0.7576	19.00	14.39
	LABOUR				
0117	Assistant Filter	Day	1.10	141.60	155.76
0114	Beldar	Day	6.50	135.25	879.12
9999	Sundries and carriage	L.S.	67.21	1.00	67.21
	TOTAL				3808.17
	Add 1 % for water charges except on 'A'				13.39
	TOTAL				3821.56
	Add 15% for contractor's profit and overheads except on 'A'				202.87
	Cost for 40.26 metre				4024.43
	Cost for one metre				99.96
	Say				99.95

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.6 250 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints. Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.65x0.75m= 19.63 Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0.274)^2$ = (-) 2.37 cum = 17.26				
(A)	(Rate as per item no. 2.8.1)	cum	17.26	103.40	1784.68
(A)	Rate as per item no. 2.25)	cum	17.26	45.70	788.78
	Breaking lead caulked joints, making blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.026	265.00	271.89
0771	Kerosene oil	litre	1.1365	19.00	21.59
	LABOUR				
0117	Assistant Filter	Day	1.30	141.60	184.08
0114	Beldar	Day	7.50	135.25	1014.38
9999	Sundries and carriage	L.S.	80.73	1.00	80.73
	TOTAL				4146.13
	Add 1% for water charges except on 'A'				15.73
	TOTAL				4161.86
	Add 15% for contractor's profit and overheads except on 'A'				238.26
	Cost for 40.26 metre				4400.12
	Cost for one metre				109.29
	Say				109.30

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.7 300 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints. Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.65x0.75m= 19.63 = 21.14 cum Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0.326)^2$ = (-) 3.36 cum = 17.79				
(A)	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	17.79	103.40	1839.49
(A)	(Rate as per item no.2.25 of S.H. Earth work	cum	17.79	45.70	813.00
	Breaking lead caulked joints. making blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.12	265.00	296.80
0771	Kerosene oil	litre	1.515	19.00	28.78
	LABOUR				
0117	Assistant Filter	Day	1.50	141.60	212.40
0114	Beldar	Day	8.50	135.25	1149.62
9999	Sundries and carriage	L.S.	94.12	1.00	94.12
	TOTAL				4434.21

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges except on 'A'				17.82
	TOTAL				4452.03
	Add 15%for contractor's profit and overheads except on 'A'				269.93
	Cost for 40.26 metre				4721.96
	Cost for one metre				117.29
	Say				117.30

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead ugto 50 metre :

18.82.8 350 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 40.26 m or 11 nos. joints.				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth				
	1x40.26x.75x0.75 m=22.65 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0378)^2$ = (-) 4.51cum = 18.14 cum				
(A)	(Rate as per item no. 2.8.1 of S.H. Earthwork)	cum	18.14	103.40	1875.68
(A)	(Rate as per item no. 2.25 of S.H. Earth work)	cum	18.14	45.70	829.00
	Breaking lead caulked joints,making blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.213	265.00	321.44
0771	Kerosene oil	litre	1.515	19.00	28.78
	LABOUR				
0117	Assistant Filter	Day	1.75	141.60	247.80
0114	Beldar	Day	9.50	135.25	1284.88
9999	Sundries and carriage	L.S.	107.64	1.00	107.64
	TOTAL				4695.22
	Add 1% for water charges except on 'A'				19.91
	TOTAL				4715.13
	Add 15% for contractor's profit and overheads except on 'A'				301.57
	Cost for 40.26 metre				5016.70
	Cost for one metre				124.61
	Say				124.60

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.9 400mm dia metre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 40.26 m or 11 nos. joints.				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth				
	1x40.26x.80x0.75 m=24.16 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0.429)^2$ = (-) 5.93cum = 18.23				
	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	18.23	103.40	1884.98(A)

Code	Description	Unit	Quantity	Rate	Amount
	(Rate as per item no.2.25 of S.H. Earth work)	cum	18.23	45.70	833.11(A)
	Breaking lead caulked jointsmaking blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.306	265.00	346.09
0771	Kerosene oil	litre	1.894	19.00	35.99
	LABOUR				
0117	Assistant Filter	Day	2.00	141.60	283.20
0114	Beldar	Day	10.50	135.25	1420.12
9999	Sundries and carriage	L.S.	121.03	1.00	121.03
	TOTAL				4924.52
	Add 1 % for water charges except on 'A'				22.06
	TOTAL				4946.58
	Add 15% for contractor's profit and overheads except on 'A'				334.27
	Cost for 40.26 metre				5280.85
	Cost for one metre				131.17
	Say				131.15

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.10 450 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints.				
	Earth work in excavationfor dismantling pipes including refilling of excavated earth				
	1x40.26x.85x0.75 m=25.67 cum.				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0.48)^2$				
	= (-) 7.29cum =18.38 cum.				
	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	18.38	103.40	1900.49A)
	(Rate as per item no. 2.25 of S.H. Earth work)	cum	18.38	45.70	839.97 (A)
	Breaking lead caulked joints, blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.40	265.00	371.00
0771	Kerosene oil	litre	2.273	19.00	43.19
	LABOUR				
0117	Assistant Filter	Day	2.25	141.60	318.60
0114	Beldar	Day	11.50	135.25	1555.38
9999	Sundries and carriage	L.S.	134.55	1.00	134.55
	TOTAL				5 163.18
	Add 1 % for water charges except on 'A'				24.23
	TOTAL				5 187.41
	Add 1 ^Tfor contractor's profit and overheads except on 'A'				367.04
	Cost for 40.26 metre				5 554.45
	Cost for one metre				137.96
	Say				137.95

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.11 500 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints. Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x.90x0.75m=27.18cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0.532)^2$ = (-) 8.94cum = 18.24cum				
(A)	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	18.24	103.40	11886.02
(A)	(Rate as per item no. 2.25 S.H. Earth work)	cum	18.24	45.70	833.57
	Breaking lead caulked joints, blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.492	265.00	395.38
0771	Kerosene oil	liter	2.652	19.00	50.39
	LABOUR				
0117	Assistant Filter	Day	2.50	141.60	354.00
0114	Beldar	Day	12.50	135.25	1690.62
9999	Sundries and carriage	L.S.	147.94	1.00	147.94
	TOTAL				5357.92
	Add 1 % for water charges except on 'A'				26.38
	TOTAL				5384.30
	Add 15%for contractor's profit and overheads except on 'A'				399.71
	Cost for 40.26 metre				5784.01
	Cost for one metre				143.67
	Say				143.65

18.82 Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :

18.82.12 600 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detaila of cost for 40.26 m or 11 nos. joints. Earth work in excavationfor dismantling pipes including refilling of excavated earth 1x40.26x1.00x0.75 m=30.20 cum				
	Deduct for pipe $1x40.26x\frac{3.1416}{4}$ x $(0.635)^2$ = (-) 12.76cum 17.44 cum.				
(A)	(Rate as per item no. 2.8.1 of S.H. Earth work	cum	17.44	103.40	1803.30
(A)	(Rate as per item no. 2.25 of S.H. Earth work)	cum	17.44	45.70	797.01
	Breaking lead caulked joints, making blocks and stacking				
	MATERIALS				
0761	Fuel wood required	quintal	1.68	265.00	445.20
0771	Kerosene oil	liter	3.41	19.00	64.79
	LABOUR				
0117	Assistant Filter	Day	3.00	141.60	424.80
0114	Beldar	Day	14.50	135.25	1961.12
9999	Sundries and carriage	L.S.	174.85	1.00	174.85

Code	Description	Unit	Quantity	Rate	Amount
	total				5671.06
	Add 1 % for water charges except on 'A'				30.71
	TOTAL				5701.78
	Add 15%for contractor's profit and overheads except on 'A'				465.22
	Cost for 40.26 metre				6167.00
	Cost for one metre				153.18
	Say				153.20

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.1 80 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.06	151.50	9.09
0114	Belder	Day	0.06	135.25	8.12
9999	Sundries	L.S.	1.82	1.00	1.82
	TOTAL				19.03
	Add 1 % for water charges				0.19
	TOTAL				19.22
	Add 15%for contractor's profit and overheads				2.88
	Cost for each cut				22.10
	Say				22.10

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.2 100 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter.	Day	0.08	151.50	12.12
0114	Belder	Day	0.08	135.25	2.73
9999	Sundries	L.S.	2.73	1.00	2.73
	TOTAL				25.67
	Add 1% for water charges				0.26
	TOTAL				25.93
	Add 15% for contractor's profit and overheads				3.89
	Cost for each cut				29.82
	Say				29.80

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.3 125 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter.	Day	0.11	151.50	16.66
0114	Belder	Day	0.11	135.25	14.88
9999	Sundries	L.S.	4.42	1.00	4.42
	TOTAL				35.96

Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges				0.26
	TOTAL				36.32
	Add 15% for contractor's profit and overheads				5.45
	Cost for each cut				41.77
	Say				41.75

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.4 150 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.15	151.50	22.27
0114	Belder	Day	0.15	135.25	20.29
9999	Sundries	L.S.	5.33	1.00	5.33
	TOTAL				48.34
	Add 1 % for water charges				0.48
	TOTAL				48.82
	Add 15% for contractor's profit and overheads				7.32
	Cost for each cut				56.14
	Say				56.15

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.5 200 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.20	151.50	30.30
0114	Belder	Day	0.20	135.25	27.05
9999	Sundries	L.S.	7.15	1.00	7.15
	TOTAL				64.50
	Add 1 % for water charges				0.64
	TOTAL				65.14
	Add 15% for contractor's profit and overheads				9.77
	Cost for each cut				74.91
	Say				74.90

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.6 250 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.25	151.50	37.88
0114	Belder	Day	0.25	135.25	38.81
9999	Sundries	L.S.	8.06	1.00	8.06
	TOTAL				79.75
	Add 1 % for water charges				0.80
	TOTAL				80.55
	Add 15% for contractor's profit and overheads				12.08
	Cost for each cut				92.63
	Say				92.65

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.7 300 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.30	151.50	45.45
0114	Belder	Day	0.30	135.25	40.58
9999	Sundries	L.S.	9.88	1.00	9.88
	TOTAL				95.90
	Add 1% for water charges				0.96
	TOTAL				96.86
	Add 15% for contractor's profit and overheads				14.53
	Cost for each cut				111.39
	Say				111.40

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.8 350 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.35	151.50	53.02
0114	Belder	Day	0.35	135.25	47.34
9999	Sundries	L.S.	10.79	1.00	10.79
	TOTAL				111.15
	Add 1% for water charges				1.11
	TOTAL				112.26
	Add 15%for contractor's profit and overheads				16.84
	Cost for each cut				129.10
	Say				129.10

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.9 400 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.40	151.50	60.60
0114	Belder	Day	0.40	135.25	54.10
9999	Sundries	L.S.	12.48	1.00	12.48
	TOTAL				127.18
	Add 1% for water charges				1.27
	TOTAL				128.45
	Add 15% for contractor's profit and overheads				19.27
	Cost for each cut				147.72
	Say				147.70

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.10 450 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.45	151.50	68.18
0114	Belder	Day	0.45	135.25	60.86

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	13.52	1.00	13.50
	TOTAL				142.56
	Add 1% for water charges				1.43
	TOTAL				143.99
	Add 15% for contractor's profit and overheads				21.60
	Cost for each cut				165.59
	Say				165.60

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.11 500 mm diametre C.I. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.50	151.50	75.75
0114	Belder	Day	0.50	135.25	67.62
9999	Sundries	L.S.	15.21	1.00	15.21
	TOTAL				158.58
	Add 1 % for water charges				1.59
	TOTAL				160.17
	Add 15% for contractor's profit and overheads				24.03
	Cost for each cut				184.20
	Say				184.20

18.83 Labour for cutting C.I. pipe with steel saw.
18.83.12 600 mm diametre C.I. pipe.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for one cut.				
	LABOUR				
0116	Fitter	Day	0.60	151.50	90.90
0114	Belder	Day	0.60	135.25	81.15
9999	Sundries	L.S.	16.12	1.00	16.12
	TOTAL				188.17
	Add 1 % for water charges				1.88
	TOTAL				190.05
	Add 15%for contractor's profit and overheads				28.51
	Cost for each cut				218.56
	Say				218.55

SUB HEAD : 19.0

DRAINAGE

19.1 Providing, laying and jointing glazed stoneware pipes class SP 1 with stiff mixture of cement mortar in the of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.1.1 100 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metre				
	MATERIALS				
1854	(i)100 mm stone ware pipes 60 cm long	each	55.00	30.00	1650.00
2224	(ii)Carriage of pipes	100m.	33.00	70.94	23.41
	Added 10% allowance for breakage in items (I) & (II)				
0367	Cement of 50 joints = 0.019 tonne	tonne	0.019	4500.00	85.50
2209	Carriage of cement	tonne	0.019	47.29	0.90
0983	Fine sand	cum	0.01	320.00	3.20
2261	Carriage of fine sand	cum	0.01	53.21	0.53
1881	Spun yarn or plain gaskin @ 0.09 kg per joint = 0.09x50 = 4.50 kg	kilogram	4.50	30.00	135.00
	LABOUR				
0123	Mason 1st class	Day	1.00	151.50	151.50
0124	Mason 2nd class	Day	1.00	141.60	141.60
0114	Beldar	Day	3.00	135.25	405.75
0101	Bhishti	Day	1.00	138.45	138.45
	TOTAL				2735.84
	Add 1 % for water charges				27.36
	TOTAL				2763.20
	Add 15% for contractor's profit and overheads				414.48
	Cost for 30 metre				3177.68
	Cost for 1 metre				105.92
	Say				105.90

19.1 Providing, laying and jointing glazed stoneware pipes class SP 1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.1.2 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metre				
	MATERIALS				
1855	(i) 150 mn stone.ware pipes 60 cm long	each	55.00	42.00	2 310.00
2225	(ii) Carriage of pipes	100m.	33.00	141.88	46.82
	Added 10% allowance for breakage in items (i) & (ii)				
0367	Cement of 50 joints = 0.036 tonne	tonne	0.036	4500.00	162.00
2209	Carriage of cement	tonne	0.036	47.29	1.70
0983	Fine sand	cum	0.019	320.00	6.08
2261	Carriage of fine sand	cum	0.019	53.21	1.01
1881	Spun yarn or plain gaskin @ 0.18 kg per joint = 0.18x50 = 9 kg	kilogram	9.00	30.00	270.00
	LABOUR				
0123	Mason 1 st class	Day	1.50	151.50	227.25
0124	Mason 2nd class	Day	1.50	141.60	212.40
0114	Beldar	Day	4.00	135.25	541.00
0101	Bhishti	Day	1.00	138.45	138.45
	TOTAL				3 916.71
	Add 1 % for water charges				39.17

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				3 955.88
	Add 15% for contractor's profit and overheads				593.38
	Cost for 30 metre				4 549.26
	Cost for 1 metre				151.64
	Say				151.65

19.1 Providing, laying and jointing glazed stoneware pipes class SP 1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.1.3 200 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metre				
	MATERIALS				
1856	(i) 200 mm stone ware pipes 60 cm long	each	55.00	80.00	4400.00
2226	(ii) Carriage of pipes	100m.	33.00	236.47	78.04
	Added 10% allowance for breakage in items (i)&(ii)				
0367	Cement of 50 joints = 0.053 tonne	tonne	0.053	4500.00	238.50
2209	Carriage of cement	tonne	0.053	47.29	2.51
983	Fine sand	cum	0.028	320.00	8.96
2261	Carriage of fine sand	cum	0.028	53.21	1.49
1881	Spun yarn or plain gaskin @ 0.24 kg per joint = 0.24x50 =12.00 kg	Kilogram	12.00	30.00	360.00
	LABOUR				
0123	Mason 1st class	Day	1.75	151.50	265.12
6124	Mason 2nd class	Day	1.75	141.60	247.80
0114	Beldar	Day	4.50	135.25	608.62
0101	Bhishti	Day	1.75	138.45	173.06
	TOTAL				6 384.10
	Add 1 % for water charges				6384
	TOTAL				6 447.94
	Add 15% for contractor's profit and overheads				967.19
	Cost for 30 metre				7 415.13
	Cost for 1 metre				247.13
	Say				247.15

19.1 Providing, laying and jointing glazed stoneware pipes class SP 1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.1.4 230 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metre				
	MATERIALS				
1857	(i) 230 mm stone wacgpipes 60 cm long	each	55.00	85.00	4,675.00
2227	(ii) Carriage of pipes	100m.	33.00	237.82	111.48
	Added 10% allowance for breakage in items (I) & (ii)				
0367	Cement of 50 joints = 0.065 tonne	tonne	0.065	4,500.00	292.50
2209	Carriage of cement	tonne	0.065	47.29	3.07
0983	Fine sand	cum	0.036	320.00	11.52
2261	Carriage of fine sand	cum	0.036	53.21	1.92
1881	Spun yarn or plain gaskin @ 0.27 kg per joint	kilogram	13.50	30.00	405.00

Code	Description	Unit	Quantity	Rate	Amount
	= 0.27x50 =13.50 kg				
	LABOUR				
0123	Mason 1st class	Day	2.00	151.50	303.00
0124	Mason 2nd class	Day	2.00	141.60	283.20
0114	Beldar	Day	5.00	135.25	676.25
0101	Bhishti	Day	1.50	138.45	207.68
	TOTAL				6 970.62
	Add 1% for water charges				69.71
	TOTAL				7 040.33
	Add 15% for contractor's profit and overheads				1 056.05
	Cost for 30 metre				8 096.38
	Cost for 1 metre				269.88
	Say				269.90

19.1 Providing, laying and jointing glazed stoneware pipes class SP 1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.1.5 250 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metre				
	MATERIALS				
1858	(i) 250 mm stone ware pipes 60 cm long	each.	55	113.00	6 215.00
2228	(ii) Carriage of pipes	100m.	33.00	405.38	133.78
	Added 10% allowance for breakage in items (i) & (ii)				
0367	Cement of 50 joints = 0.094 tonne	tonne	0.094	4500.00	423.00
2209	Carriage of cement	tonne	0.094	47.29	4.45
0 983	Fine sand	cum	0.05	320.00	16.00
2261	Carriage of fine sand	cum	0.05	53.21	2.66
1881	Spun yarn or plain gaskin @ 0.30 kg per joint = 0.30x50= 15.00 kg	kilogram	15.00	30.00	450.00
	LABOUR				
0123	Mason 1st class	Day	2.25	151.50	340.88
0124	Mason 2nd class	Day	2.25	141.60	318.60
0114	Beldar	Day	5.50	135.25	743.88
0101	Bhishti	Day	1.50	138.45	207.68
	TOTAL				8 855.93
	Add 1 % for water charges				88.56
	TOTAL				8 944.49
	Add 15% for contractor's profit and overheads				1341.67
	Cost for 30 metre				10 286.16
	Cost for 1 metre				342.87
	Say				342.85

19.1 Providing, laying and jointing glazed stoneware pipes class SP 1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.1.6 300 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 metre				
	MATERIALS				
1859	(i) 300mm stoneware pipes 60 cm long	each	55.00	165.00	9 075.00
2229	(ii) Carriage of pipes	100m.	33.00	506.73	167.22

Code	Description	Unit	Quantity	Rate	Amount
	Added 10% allowance for breakage in items (i)&(ii)				
0367	Cement of 50 joints = 0.125 tonne	tonne	0.125	4 500.00	562.00
2209	Carriage of cement	tonne	0.125	47.29	5.91
0983	Fine sand	cum	0.075	320.00	24.00
2261	Carriage of fine sand	cum	0.075	53.21	3.99
1881	Spun yarn or plain gaskin = 0.30x50 =15.00 kg	kilogram	18.00	30.00	540.00
	LABOUR				
0123	Mason 1st class	Day	2.50	151.50	378.75
0124	Mason 2nd class	Day	2.50	141.60	354.00
0114	Beldar	Day	6.00	135.25	811.50
0101	Bhishti	Day	1.50	138.45	207.68
	TOTAL				12 130.55
	Add 1 % for water charges				121.31
	TOTAL				12 251.86
	Add15% for contractor's profit and overheads				1837.78
	Cost for 30 metre				14 089.64
	Cost for 1 metre				469.65
	Say				469.65

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) alround S.W. pipes including bed concrete as per standard design:

19.2.1 100 mm diameter S. W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Area = W x (W/2) + 112x (3.14/4 x W^2) - (3.14/4 xd^2) = W^2 x {'$A^{1/2}$ + 1/2 x (3.14/4)} - (3.14/4 x d^2) Where W = D + X D = 100 + 12 + 12 = 124 mm or 12.4 cm X = 300 mm as trench depth is less than 1200 mm Area = $(30.0 + 12.4)^2$ (0.5 + 3.14x1/8) - 3.14x'/4X$(12.4)^2$ = $(42.4)^2$ (0.5 + 3.14/8) - 3.14/4x$(12.4)^2$ = (1797.76) (0.89) - 0.7854x153.76 = 1600.01-120.76 = 1479.2 sq.cm. = 0.1479 sqm Say 0.148 sqm For 10 m length qty. of concrete reqd. = 1.48 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	1.48	2 237.75	3 311.87
	Cost of 10 metres				3 311.87
	Cost per metre				331.19
	Say				331.20

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) alround S.W. pipes including bed concrete as per standard design:

19.2.2 150 mm diameter S.W, pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Area = W x (W/2) + $^1/_2$ x (3.14/4 x W^2) - (3.14/4 x$d^{2)}$ = W^2 x {$^1/_2$ + 14 x (3.14/4)} - (3.14/4 x d^2) Where W = D + X D = 150+ 16+ 16= 182 mm or 18.2 cm X = 300 mm as trench depth is less than 1200 mm Area = $(30.0 + 18.2)^2$ (0.5 + 3.14x1/8) - 3.14x¼x$(18.2)^2$ = $(48.2)^2$(0.5 + 3.14/8) - 3.14/4x$(18.2)^2$ = (2323.24) (0.89)-260.02 = 2067.68 -260.02 = 1807.66 sq.cm. = 0.1808 sqm Say 0.181 sqm For 10 m length qty. of concrete reqd. = 1.81 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	1.81	2 237.75	4 050.33
	Cost of 10 metres				4 050.33
	Cost per metre				405.33
	Say				405.05

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) alround S.W. pipes including bed concrete as per standard design:

19.2.3 200 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Area = W x (W/2) + 1/2 x (3.14/4 x W^2) - (3.14/4 xd^2) = W^2 x {1/2 + 1/2 x (3.14/4)} - (3.14/4 x d^2) Where W = D + X D = 200 + 17 + 17 = 234 mm or 23.4 cm X = 300 mm as trench depth is less than 1200 mm Area = $(30.0 + 23.4)^2$ (0.5 + 3.14x1/8) - 3.14x'/4x$(23.4)^2$ = $(53.4)^2$ (0.5 + 3.14/8) - 3.14/4x$(23.4)^2$ = (2851.56) (0.89)-429.83 = 2537.89 -429.83 =2108.06 sq.cm. = 0.2108 sqm Say 0.211 sqm For 10 m length qty. of concrete reqd. = 2.11 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	2.11	2 237.75	4 721.65
	Cost of 10 metres				4 721.65
	Cost per metre				472.17
	Say				472.15

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) alround S.W. pipes including bed concrete as per standard design:

19.2.4 230 mm diameter S.W, pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Area = W x (W/2) + ½x(3.14/4 x W^2) - (3.14/4 xd^2) = W^2 x {½ + ½ x (3.14/4)} - (3.14/4 x d^2) Where W = D + X D = 230+ 19+ 19 = 268 mm or 26.8 cm X = 300 mm as trench depth is less than 1200 mm Area = $(30.0 + 26.8)^2$ (0.5 + 3.14x1/8) - 3.14x¼x$(26.8)^2$ = $(56.8)^2$ (0.5 + 3.14/8) - 3.14/4x$(26.8)^2$ = (3226.24) (0.89) - 563.82 = 2871.35 - 563.82 = 2307.53 sq.cm. = 0.2308 sqm Say 0.231 sqm For 10 m length qty. of concrete reqd. = 2.31 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	2.31	2 237.75	5 169.20
	Cost of 10 metres				5 169.20
	Cost per metre				516.92
	Say				516.90

19.2 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) alround S.W. pipes including bed concrete as per standard design:

19.2.5 250 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre Area = W x (W/2) + ½ x (3.14/4 x W^2) - (3.14/4 xd^2) = W^2 x {½ + ½ x (3.14/4)} - (3.14/4 x d^2) Where W = D + X D = 250 + 20 + 20 = 290 mm or 29.0 cm X = 300 mm as trench depth is less than 1200 mm Area = $(30.0 + 29.0)^2$ (0.5 + 3.14x1/8) - 3.14x¼x$(29.0)^2$ = $(59.0)^2$ (0.5 + 3.14/8) - 3.14/4x$(29.0)^2$ = (3481.00) (0.89)-660.18 = 3098.09 - 660.18 = 2437.90 sq.cm. = 0.24379 sqm Say 0.244 sqm For 10 m length qty. of concrete reqd. = 2.44 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	2.44	2 237.75	5 460.11
	Cost of 10 metres				5 460.11
	Cost per metre				546.01
	Say				546.00

19.3 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :

19.3.1 100 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre length pipe Area = WxDl + 2x½xR Cot QxR- $[R^2/2(3.14/2-Q)]$ - $(3.14/2)R^2$ = WD1 + R^2(Cot Q) - R^2(3.14/2 - Q) - $(3.14/2)R^2$ = WDl+R^2(CotQ-3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X ; X = 300 mm, D = 100 + 12 + 12 = 124 mm W= 124+ 300 = 424 mm D1 = Depth = 100 + (½ x 124) = 162 mm R = 62 mm Sin Q = (2x62)/424 = 0.292 thereforeQ = 17°0' Hence Tan Q = 0.3057 Area = 424 x 162 + $(62)^2$ (Cot Q - 3.14 + Q) = [68688 + 3844 (1/0.3057 - 180° + 17°0')] sqmm = [68688 + 3844 (3.27 - 163°0' x 3.14/180)] sqmm = (68688 + 3844 x 0.43) sqmm = (68688 + 1652.92) sqmm = 70340.92 sqmm Say 70341 sqmm or 0.070341 sqm For 10 m length qty. of concrete reqd. = 0.07034x10 = 0.7034 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	0.7034	2 237.75	1 574.03
	Cost of 10 metres				1 574.03
	Cost per metre				157.40
	Say				157.40

19.3 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :

19.3.2 150 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre length pipe Area = WxDl + 2x½xRcot Q R- $[R^2/2(3.14/2-Q)]$ -$(3.14/2)R^2$ = WD1 + R^2(Cot Q) - R^2(3.14/2 - Q) - $(3.14/2)R^2$ = WD1 + R^2(Cot Q - 3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X;X = 300mm, D= 150+ 16+ 16 = 182 mm W= 182 + 300 = 482 mm D1 = Depth = 150 + (½ x 182) = 241 mm R = 91 mm Sin Q = (2x91)/482 = 0.3776 therefore Q = 22°12' Hence Tan Q = 0.4081				

Code	Description	Unit	Quantity	Rate	Amount
	Area = 482x241 +$(91)^2$(Cot Q - 3.14 + Q) = [116162 + 8281 (1/0.4081-180° +22°12')] sqmm = [116162 + 8281 (2.45-157°48'x3.14/180)] sqmm = [116162 + 8281 x (2.45-2.75)] sqmm = [116162 + 8281 x (-0.30)] sqmm = (116162 - 2484.3) sqmm = 113677.7 sqmm Say 113677.7 sqmm or 0.1136777 sqm For 10 m length qty. of concrete reqd. = 0.1136777x10= 1.136777 cum Say 1.14 cum				
	Rate as per item no 4.1.10 of SH: Concrete Work	cum	1.14	2 237.75	2 551.04
	Cost of 10 metres				2 551.04
	Cost per metre				255.10
	Say				255.10

19.3 Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :

19.3.3 200 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 rnete length pipe Area = WxDl + 2x½xR Cot Q.R.- $[R^2/2(3.14/2-Q)]$ -$(3.14/2)R^2$ = WD1 + R^2(Cot Q) - R^2(3.14/2 - Q) - $(3.14/2)R^2$ = WD1 + R^2(Cot Q - 3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X ; X = 300 mm, D = 200 + 17 + 17 = 234 mm W = 234 + 300 = 534 mm D1 = Depth = 150 + (½ x 234) = 267 mm R= 117mm Sin Q = (2x117)/534 = 0.4382 thereforeQ = 26°0' Hence Tan Q = 0.4877 Area = 534 x 267 + $(117)^2$ (Cot Q - 3.14 + Q) = [142578 + 13689 (1/0.4877-180° + 26°0')] sqmm = [142578 + 13689 (2.05- 54°0' x 3.14/180)] sqmm = [142578 + 13689 x (2.05-2.69)] sqmm = [142578 + 13689 x (-0.64)] sqmm = (142578 - 8760.96) sqmm = 133817.04 sqmm Say 133817 sqmm or 0.134 sqm For 10 m length qty. of concrete reqd. = 0.134x10= 1.34 cum				
	Rate as per item no 4.1. 10 of SH: Concrete Work	cum	1.34	2 237.75	2 998.58
	Cost of 10 metres				2 998.58
	Cost per metre				299.86
	Say				299.85

19.3: Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :

19.3.4: 230 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nretre Length pipe Area = WxDl + 2x'/$_2$xR cot Q.R-'[R^2(3.14/2-Q)] - (3.14/2)R^2 = WD1 + R^2(Cot Q) - R^2(3.14/2 - Q) - (3.14/2)R^2 = WD1 +R^2(CotQ-3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X ; X = 300 mm, D = 230 + 19 + 19 = 268 mm W = 268 + 300 = 568 mm D1 = Depth = 150 + (1/$_2$ x 268) = 284 mm R= 134 mm Sin Q = (2xl34)/568 = 0.47183 thereforeQ = 28°9' Hence Tan Q = 0.5351 Area = 568 x 284 + $(134)^2$ (Cot Q - 3.14 + Q) = [161312 + 17956 (1/0.5351 - 180° + 22° 12')] sqmm ‘ = [161312+ 17956(l.87- 151°51'x 3.14/180)] sqmm = [161312 + 17956 x (1.87-2.65)] sqmm = [161312 + 17956 x (-0.78)] sqmm = (161312 - 14005.68) sqmm = 147306 sqmm Say 147306 sqmm or 0.147 sqm For 10 m length qty. of concrete reqd. = 0.147x10 =1.47 cum				
	Rate as per item no 4.1.10 of SH : Concrete Work	cum	1.47	2 237.75	3 289.49
	Cost of 10 metres				3 289.49
	Cost per metre				328.95
	Say				328.95

19.3 : Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :

19.3.5: 250 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre length pipe Area = WxDl + 2x'/$_2$xR - [R^2/2(3.14/2-Q)] - (3.14/2)R^2 = WD1 + R^2(Cot Q) - R^2(3.14/2 - Q) - (3.14/2)R^2 = WD1 +R^2(CotQ-3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X ; X = 300 mm, D = 250 + 20 + 20 = 290 mm W = 290 + 300 = 590 mm Dl = Depth = 150 + QA x 290) = 295 mm R = 145 mm Sin Q = (2xl45)/590 = 0.49154 therefore Q =				

Code	Description	Unit	Quantity	Rate	Amount
	29°26' Hence Tan Q = 0.5635 Area = 590 x 295 + (145)^2 (Cot Q - 3.14 + Q) =[174050 + 21025(1/0.5635- 180° + 29°26')] sqmm = [174050 + 21025(1.77- 150°34'x 3.14/180)] sqmm = [174050 + 21025 x (1.77-2.63)] sqmm = [174050 + 21025 x (-0.86)] sqmm = (174050 - 18081.5) sqmm = 155968.5 sqmm Say 155968 sqmm or 0.156 sqm For 10 m length qty. of concrete reqd. = 0.156x10= 1.56 cum -" Rate as per item no 4.1.10 of SH : Concrete Work	cum	1.56	2 237.75	3 490.89
	Cost of 10 metres				3 490.89
	Cost per metre				349.09
	Say				349.10

19.3 : Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :

19.3.6: 300 mm diameter S.W. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 meter length pipe Area= WxDl + 2x'/$_2$xR,- [R^2?2(3.14/2-Q)] - (3.14/2)R^2 = WD1 + R^2(Cot Q) - R^2(3.14/2 - Q) - (3.14/2)R2 = WD1 + R^2(Cot Q - 3.14 + Q) Where Sin Q = [R/(W/2)] = 2R/W W = D + X ; X = 300 mm, D = 300 + 25 + 25 = 350 mm W = 350 + 300 = 650 mm Dl = Depth = 150 + ('^{1}/$_2$ x 350) = 325 mm R = 175 mm Sin Q = (2xl75)/650 = 0.5385 thereforeQ = 32°34' Hence Tan Q = 0.6387 Area = 650 x 325 + (175)^2 (Cot Q - 3.14 + Q) = [211250 + 30625(1/0.6387- 180° + 32°34')] sqmm = [211250 + 30625(1.566- 147°26'x 3.14/180)] sqmm = [211250 + 30625 x (1.566-2.571)] sqmm = [211250 + 30625 x (-1.005)] sqmm = [211250 - 30778.13) sqmm = 180471.87 sqmm Say 0.180 sqm For 10 m length qty. of concrete reqd. = 0.180x10= 1.80 cum Rate as per item no 4.1.10 of SH: Concrete Work	cum	1.80	2 237.75	4 027.95
	Cost of 10 metres				4 027.95
	Cost per metre				402.80
	Say				402.80

19.4 : Providing and fixing square-mouth S.W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :

19.4.1: 100x100 mm size P type

19.4.1.1: With F.P.S. Bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one gully trap				
1900	100x100 mm Gully trap 'P' type	each	1.00	55.00	55.00(A)
1364	C.I. grating .100x100 mm	each	1.00	10.00	10.00(A)
1352	C.I. cover with frame 300x300mm inside	each	1.00	265.00	256.00(A)
9999	Carriage of materials	L.S.	4.50	1.00	4.50
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum =0.107 cum Deduct: 0.345/3x[0.09+0.01+(0.09x0.01)l/2] = 0.015 cum 3.14/4x$(0.124)^2$x0.47 = 0.006 cum = 0.021 cum Net quantity 0.107 cum (-) 0.021 cum = 0.086 cum say 0.09 cum				
	(Rate as per item 4.1.11 of S.H. : Concrete)	cum	0.09	2 079.60	187.16
	Brick work with 75 class designation brick in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.13	2 293.40	298.14
	Rate as per item no 6.1.1 of SH : Brick Work				
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.008	3 579.10	28.63
	(Rate as per item 4.2.3 of S.H. : concrete				
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.358x(l.20+0.40)] = 0.286 sqm say 0.29 sqm				
	(Rate as per item no.13.9 of S.H. : finishing)	sqm	0.29	112.80	32.71
	TOTAL				881.14
	Add 1 % for water charges on (A)				3.34(B)
	TOTAL				884.48
	Add 15% for contractor's profit and overheads on (A+B)				50.68
	Cost for 1 trap				935.16
	Say				935.15

19.4 : Providing and fixing square-mouth S.W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :

19.4.1: 100x100 mm size P type

19.4.1.2:With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one gully trap				
1900	100x100 mm Gully trap 'P' type	each	1.00	55.00	55.00(A)
1364	C.I. grating .100x100 mm	each	1.00	10.00	10.00(A)
1352	C.I. cover with frame 300x300mm inside	each	1.00	265.00	256.00(A)
9999	Carriage of materials	L.S.	4.50	1.00	4.50(A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum =0.107 cum Deduct: 0.345/3x[0.09+0.01+(0.09x0.01)l/2] = 0.015 cum 3.14/4x$(0.124)^2$x0.47 = 0.006 cum = 0.021 cum Net quantity 0.107 cum (-) 0.021 cum = 0.086 cum say 0.09 cum				
	(Rate as per item 4.1.11 of S.H. : Concrete)	cum	0.09	2 079.60	187.16
	Brick work with sewer bricksconforming to IS:4885 in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum				
	Rate as per item no 6.36.1 of SH : Brick Work	cum	0.13	3 048.75	396.34
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum				
	(Rate as per item 4.2.3 of S.H. : concrete	cum	0.008	3 579.10	28.63
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.358x(l.20+0.40)] = 0.286 sqm say 0.29 sqm				
	(Rate as per item no.13.9.1 of S.H. : finishing)	sqm	0.29	112.80	32.71
	TOTAL				979.34
	Add 1 % for water charges on (A)				3.34(B)
	TOTAL				982.68
	Add 15% for contractor's profit and overheads on (A+B)				50.68
	Cost for 1 trap				1033.36
	Say				1033.35

19.4: Providing and fixing square-mouth S.W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :

19.4.2: 150 x 100 mm size P type.

19.4.2.1: With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one gully trap				
1902	S.W. Gully trap 'P' type 150x100mm	each	1.00	86.00	86.00(A)
1365	C.I. grating .150x150 mm	each	1.00	19.00	19.00(A)
1352	C.I. cover with frame 300x300mm inside	each	1.00	265.00	265.00(A)
9999	Carriage of materials	L.S.	4.50	1.00	4.50(A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum =0.107 cum Deduct: $0.322/3x[0.09+0.023+(0.09x0.023)^{1}/_{2}]$ = 0.017 cum $3.14/4x(0.124)^{2}x0.485$ = 0.006 cum = 0.023 cum Net quantity 0.107 cum (-) 0.023 cum = 0.084 cum say 0.08 cum	cum	0.08	2 079.60	166.37
	(Rate as per item 4.1.11 of S.H. : Concrete)				
	Brick work with 75 class designation brick in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.13	2 293.40	298.14
	Rate as per item no 6.1.1 of SH : Brick Work				
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum	cum	0.008	3 579.10	28.63
	(Rate as per item 4.2.3 of S.H. : concrete				
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.337x(l.20+0.60)] = 0.303 sqm say 0.30 sqm	sqm	0.30	112.80	33.84
	(Rate as per item no.13.9.1 of S.H. : finishing)				
	TOTAL				901.48
	Add 1 % for water charges on (A)				3.74(B)
	TOTAL				905.22
	Add 15% for contractor's profit and overheads on (A+B)				56.74
	Cost for 1 trap				961.96
	Say				961.95

19.4 : Providing and fixing square-mouth S.W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :

19.4.2: 150 x 100 mm size P type.

19.4.2.2: With sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one gully trap				
1902	S.W. Gully trap 'P' type150x100 mm	each	1.00	86.00	86.00(A)
1366	C.I. grating .150x150 mm	each	1.00	19.00	19.00(A)
1352	C.I. cover with frame 300x300mm inside	each	1.00	265.00	265.00(A)
9999	Carriage of materials	L.S.	4.50	1.00	4.50(A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum =0.107 cum Deduct: $0.322/3x[0.09+0.023+(0.09x0.023)^{1}/_{2}]$ = 0.017 cum $3.14/4x(0.124)^{2}x0.485$ = 0.006 cum = 0.023 cum Net quantity 0.107 cum (-) 0.023 cum = 0.084 cum say 0.08 cum	cum	0.08	2 079.60	166.37
	(Rate as per item 4.1.11 of S.H. : Concrete) Brick work with sewer bricks conforming to IS: 4885 in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum	cum	0.13	2 293.40	298.14
	Rate as per item no 6.36.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum				
	(Rate as per item 4.2.3 of S.H. : concrete 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.337x(l.20+0.60)] = 0.303 sqm say 0.30 sqm	cum	0.008	3 579.10	28.63
	(Rate as per item no.13.9.1 of S.H. : finishing)	sqm	0.30	112.80	33.84
	TOTAL				999.68
	Add 1 % for water charges on (A)				3.74(B)
	TOTAL				1003.42
	Add 15% for contractor's profit and overheads on (A+B)				56.74
	Cost for 1 trap				1060.16
	Say				1060.15

19.4: Providing and fixing square-mouth S.W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :

19.4.3: 180x150 mm size P type

19.4.3.1: With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one gully trap				
1904	180x150 mm Gully trap 'P' type	each	1.00	160.00	160.00(A)
1367	C.I. grating .180x180 mm	each	1.00	23.00	23.00(A)
1352	C.I. cover with frame 300x300mm inside	each	1.00	265.00	265.00(A)
9999	Carriage of materials	L.S.	4.50	1.00	4.50(A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum =0.107 cum Deduct: $0.55/3x[0.09+0.032+(0.09x0.032)^{1}/_{2}]$ = 0.008 cum $3.14/4x(0.182)^{2}x0.70$ = 0.018 cum = 0.026 cum Net quantity 0.107 cum (-) 0.026 cum = 0.081 cum say 0.08 cum				
	(Rate as per item 4.1.11 of S.H. : Concrete)	cum	0.08	2 079.60	166.37
	Brick work with 75 class designation brick in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.13	2293.40	298.14
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum				
	(Rate as per item 4.2.3 of S.H. : concrete)	cum	0.008	3 579.10	28.63
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.166x(l.20+0.72)] = 0.159 sqm say 0.16 sqm				
	(Rate as per item no.13.9.1 of S.H. : finishing)	sqm	0.16	112.80	18.05
	TOTAL				963.69
	Add 1 % for water charges on (A)				4.53(B)
	TOTAL				968.22
	Add 15% for contractor's profit and overheads on (A+B)				68.55
	Cost for 1 trap				1 036.77
	Say				1036.75

19.4: Providing and fixing square-mouth S. W. gully trap class SP 1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :

19.4.3: 180x150 mm size P type

19.4.3.2: With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one gully trap				
1904	180x150 mm Gully trap 'P' type	each	1.00	160.00	160.00(A)
1367	C.I. grating .180x180 mm	each	1.00	23.00	23.00(A)
1352	C.I. cover with frame 300x300mm inside	each	1.00	265.00	265.00(A)
9999	Carriage of materials	L.S.	4.50	1.00	4.50(A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 0.68x0.68x0.10 m = 0.046 cum Concrete around trap 0.30x0.30x0.675 m = 0.061 cum =0.107 cum Deduct: $0.155/3x[0.09+0.032+(0.09x0.032)^{1}/_{2}]$ = 0.008 cum $3.14/4x(0.182)^{2}x0.70$ = 0.018 cum = 0.026 cum Net quantity 0.107 cum (-) 0.026 cum = 0.081 cum say 0.08 cum				
	(Rate as per item 4.1.11 of S.H. : Concrete)	cum	0.08	2 079.60	166.37
	Brick work with sewer bricks conforming to IS: 4885. in cement mortar 1:4(1 cement: 4 coarse sand) 1.66x0.115x0.675 m = 0.129 cum say 0.13 cum				
	Rate as per item no 6.36.1 of SH : Brick Work	cum	0.13	3048.75	396.34
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x0.115x0.04 m = 0.008 cum				
	(Rate as per item 4.2.3 of S.H. : concrete	cum	0.008	3 579.10	28.63
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement: [l/2x0.166x(l.20+0.072)] = 0.159 sqm say 0.16 sqm				
	(Rate as per item no.13.9.1 of S.H. : finishing)	sqm	0.16	112.80	18.05
	TOTAL				1061.89
	Add 1 % for water charges on (A)				4.53(B)
	TOTAL				1066.43
	Add 15% for contractor's profit and overheads on (A+B)				68.55
	Cost for 1 trap				1134.97
	Say				1134.95

19.5 : Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.1: 100 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.49	135.25	66.27
0115	coolie	Day	0.36	135.25	48.69
	TOTAL				114.69
	Add 1% for water charges				1.15
	TOTAL				116.11
	Add 15% for contractor's profit and overheads				17.42
	Cost for 10 metre				133.53
	Cost for 1 metre				13.35
	Say				13.35

19.5: Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.2: 150 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.49	135.25	66.27
0115	coolie	Day	0.45	135.25	60.86
	TOTAL				127.13
	Add 1 % for water charges				1.27
	TOTAL				128.40
	Add 15% for contractor's profit and overheads				19.26
	Cost for 10 metre				147.66
	Cost for 1 metre				14.77
	Say				14.75

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.3 200 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.49	135.25	66.27
0115	Coolie	Day	0.51	135.25	68.98
	TOTAL				135.25
	Add 1% for water charges				1.35
	TOTAL				136.60
	Add 15% for contractor's profit and overheads				20.49
	Cost for 10 metre				157.09
	Cost for 1 metre				15.71
	Say				15.70

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.4 230 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.49	135.25	66.27
0115	Collie	Day	0.54	135.25	73.04
	TOTAL				139.31
	Add 1% for water charges				1.39
	TOTAL				140.70
	Add 15% for contractor's profit and overheads				21.10
	Cost for 10 metre				161.80
	Cost for 1 metre				16.18
	Say				16.20

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.5 250 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.49	135.25	66.27
0115	Coolie	Day	0.57	135.25	77.09
	TOTAL				143.36
	Add 1% for water charges				1.43
	TOTAL				144.79
	Add 15% for contractor's profit and overheads				21.72
	Cost for 10 metre				166.51
	Cost for 1 metre				16.65
	Say				16.65

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.6 300 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.49	135.25	66.27
0115	Coolie	Day	0.63	135.25	85.21
	Add 1 % for water charges				1.51
	TOTAL				152.99
	Add 15% for contractor's profit and overheads				22.95
	Cost for 10 metre				175.94
	Cost for 1 metre				17.59
	Say				17.60

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.7 350 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.60	135.25	81.15
0115	Coolie	Day	0.69	135.25	93.32
	TOTAL				174.47
	Add 1% for water charges				1.74
	TOTAL				176.21
	Add 15% for contractor's profit and overheads				26.43
	Cost for 10 metre				202.64
	Cost for 1 metre				20.26
	Say				20.25

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.8 400 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.75	135.25	101.44
	TOTAL				190.70
	Add 1% for water charges				1.91
	TOTAL				192.61
	Add 15% for contractor's profit and overheads				28.89
	Cost for 10 metre				221.50
	Cost for 1 metre				22.15
	Say				22.15

19.5 Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:

19.5.9 450 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	LABOUR				
0114	Beldar	Day	0.66	135.25	89.26
0115	Coolie	Day	0.81	135.25	109.55
	TOTAL				198.81
	Add 1% for water charges				1.99
	TOTAL				200.80
	Add 15% for contractor's profit and overheads				30.12
	Cost for 10 metre				230.92
	Cost for 1 metre				23.09
	Say				23.10

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.1 100 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1700	100 mm dia pipe (in 2 m. length = 5 nos.)	metre	10.00	118.00	1 180.00
1714	Collars 5 Nos.	each	5	16.00	80.00
2275	carriage of pipes	100 metre	10.00	116.30	11.63
0 367	Cement of 5 joints = 5x0.00065 = 0.00325 cum = 0.0048 t say 0.005 tonne	tonne	0.005	4 500.00	22.50
2209	Carriage of cement	tonne	0.005	47.29	0.24
0983	Fine sand for 5 joint = 0.0013x5 = 0.0065 cum = 0.006 cum	cum	0.006	320.00	1.92
2261	Carriage of sand	cum	0.006	53.21	0.32
	LABOUR				
0 123	Mason 1st class	Day	0.32	151.50	48.48
0124	Mason 2nd class	Day	0.32	141.60	45.31
0114	Beldar	Day	0.63	135.25	85.21
0101	Bhishti	Day	0.16	138.45	22.15
	TOTAL				1 497.76
	Add 1% for water charges				14.98
	TOTAL				1 512.74
	Add 15% for contractor's profit and overheads				226.91
	Cost for 10 metre				1 739.65
	Cost for 1 metre				173.97
	Say				173.95

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.2 150mmdia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1701	150 mm dia pipe (in 2 m. length = 5 nos.)	metre	10.00	135.00	1 350.00
1715	Collars 5 Nos.	each	5	21.00	105.00
2281	carriage of pipes	100metre	10.00	193.83	19.38
0367	Cement of 5 joints = 5x0.0008 = 0.004 cum = 0.006 tonne	tonne	0.006	4 500.00	27.00
2209	Carriage of cement	tonne	0.006	47.29	0.28
0983	Fine sand for 5 joint = 0.0016x5 = 0.008 cum	cum	0.008	320.00	2.56
2261	Carriage of sand	cum	0.008	53.21	0.43
	LABOUR				
0123	Mason 1 st class	Day	0.39	151.50	59.08
0124	Mason 2nd class	Day	0.39	141.60	55.22
0114	Beldar	Day	0.78	135.25	105.50
0101	Bhishti	Day	0.16	138.45	22.15
	TOTAL				1 746.60
	Add 1% for water charges				17.47
	TOTAL				1 764.07
	Add 15% for contractor's profit and overheads				264.61
	Cost for 10 metre				2 028.68
	Cost for 1 metre				202.87
	Say				202.85

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.3 250 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1702	250 mm dia pipe (in 2 m. length = 5 nos.)	metre	10.00	157.00	1570.00
1716	Collars 5 Nos.	each	5.00	34.00	170.00
2287	carriage of pipes	100metre	10.00	448.05	44.80
0367	Cement of 5 joints = 5x0.0012 = 0.006 cum = 0.009tonne	tonne	0.009	4500.00	40.50
2209	Carriage of cement	tonne	0.009	47.29	0.43
0983	Fine sand for 5 joint = 0.0024x5 = 0.012 cum	cum	0.012	320.00	3.48
2261	Carriage of sand	cum	0.012	53.21	0.64
	LABOUR				
0123	Mason 1st class	Day	0.54	151.50	81.81
0124	Mason 2nd class	Day	0.54	141.60	76.46
0114	Beldar	Day	1.50	135.25	202.88
0101	Bhishti	Day	0.23	138.45	31.84
	TOTAL				2,223.20
	Add 1% for water charges				22.23
	TOTAL				2,245.43
	Add 15% for contractor's profit and overheads				336.81
	Cost for 10 metre				2,582.24
	Cost for 1 metre				258.22
	Say				258.20

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.4 300 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1703	300 mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	228.00	2 280.00
1717	Collars 4 Nos.	each	4.00	42.00	168.00
2290	carriage of pipes	100 metre	10.00	553.80	55.38
0367	Cement of 4 joints = 4x0.00185 = 0.0074 cum = 0.011 tonne	tonne	0.011	4500.00	49.50
2209	Carriage of cement	tonne	0.011	47.29	0.52
0983	Fine sand for 4 joint = 0.0037x4 = 0.0148 say 0.015cum = 0.006 cum	cum	0.015	320.00	4.40
2261	Carriage of sand	cum	0.015	53.21	0.80
	LABOUR				
0123	Mason 1st class	Day	0.59	151.50	89.38
0124	Mason 2nd class	Day	0.59	141.60	83.54
0114	Beldar	Day	1.16	135.25	156.89
0101	Bhishti	Day	0.20	138.45	27.69
	TOTAL				2 916.50
	Add 1% for water charges				29.16
	TOTAL				2 945.66
	Add 15% for contractor's profit and overheads				441.85
	Cost for 10 metre				3 387.51
	Cost for 1 metre				338.75
	Say				338.75

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.5 450 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1704	450 mmdiampe (in 2.5 m. length = 4 nos.)	metre	10.00	333.00	3 330.00
1718	Collars 4 Nos.	each	4.00	63.00	252.00
2299	carriag of pipes	metre	10.00	1 292.20	129.22
0 367	Cement of 4 joints = 4x0.0041 = 0.0164 cum = 0.024 t	tonne	0.024	4 500.00	108.00
2209	Carriage of cement	tonne	0.024	47.29	1.13
0983	Fine sand for 4 joint = 0.0082x4 = 0.033 cum	cum	0.033	320.00	10.56
2261	Carriage of sand	cum	0.033	53.21	1.76
	LABOUR				
0123	Mason 1st class	Day	0.75	151.50	113.62
0124	Mason 2nd class	Day	0.75	141.60	106.20
0114	Beldar	Day	1.50	135.25	202.88
0101	Bhishti	Day	0.33	138.45	45.69
	TOTAL				4 301.06
	Add 1% for water charges				43.01
	TOTAL				4 344.07
	Add 15% for contractor's profit and overheads				651.61
	Cost for 10 metre				4 995.68
	Cost for 1 metre				499.57
	Say				499.55

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

9.6.6 500 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1705	500 mm dia pipe (in 2.5 m. length = 4)	metre	10.00	398.00	3 980.00
1719	Collars 4 Nos.	each	4.00	73.00	292.00
2299	carriage of pipe	100 metre	10.00	1 292.20	129.22
0367	Cement of 4 joints = 4x0.00185 = 0.0074 cum = 0.011 t	tonne	0.026	4 500.00	117.00
2209	Carriage of cement	tonne	0.026	47.29	1.23
983	Fine sand for 4 joint = 0.0037x4 = 0.0148 cum = 0.015 cum	cum	0.036	320.00	11.52
2261	Carriage of sand	cum	0.036	53.21	1.92
	LABOUR				
0123	Mason 1 st class	Day	0.81	151.50	122.72
0124	Mason 2nd class	Day	0.81	141.60	114.70
0114	Beldar	Day	1.62	135.25	219.10
0101	Bhishti	Day	0.33	138.45	45.69
	TOTAL				5 035.10
	Add 1 % for water charges				50.35
	TOTAL				5 085.45
	Add 15% for contractor's profit and overheads				762.82
	Cost for 10 metre				5 848.27
	Cost for 1 metre				584.83
	Say				584.85

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.7 600 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1706	600mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	642.00	6 420.00
1720	Collars 4 Nos	each	4.00	92.00	368.00
2303	carriage of pipes	100 metre	10.00	1 938.30	193.83
0367	Cement of 4 joints = 4x0.0054 = 0.0216 cum = 0.032 t	tonne	0.032	4 500.00	144.00
2209	Carriage of cement	tonne	0.032	47.29	1.51
0983	Fine sand for 4 joint = 0.0108x4 = 0.043 cum	cum	0.043	320.00	13.76
2261	Carriage of sand	cum	0.043	53.21	2.29
	LABOUR				
0123	Mason 1 st class	Day	0.92	151.50	139.38
0124	Mason 2nd class	Day	0.92	141.60	130.27
0114	Beldar	Day	1.83	135.25	247.51
0101	Bhishti	Day	0.33	138.45	45.69
	TOTAL				7 706.24
	Add 1% for water charges				77.06
	TOTAL				7 783.30
	Add 15% for contractor's profit and overheads				1 167.49
	Cost for 10 metre				8 950.79
	Cost for 1 metre				895.08
	Say				895.10

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.8 700 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1707	700 mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	719.00	7 190.00
1721	Collars 4 Nos	each	4.00	102.00	408.00
2303	carriage of pipes	100 meire	10.00	1 938.30	193.83
0367	Cement of 4 joints = 4x0.0062 = 0.0248 cum = 0.037 t	tonne	0.037	4 500.00	166.50
2209	Carriage of cement	tonne	0.037	47.29	1.75
0983	Fine sand for 4 joint = 0.0124x4 = 0.0496 cum = 0.05 cum	cum	0.05	320.00	16.00
2261	Carriage of sand	cum	0.05	53.21	2.66
	LABOUR				
0123	Mason 1 st class	Day	1.03	151.50	156.05
0124	Mason 2nd class	Day	1.03	141.60	145.85
0114	Beldar	Day	2.06	135.25	278.62
0101	Bhishti	Day	0.42	138.45	58.15
	TOTAL				8 617.41
	Add 1% for water charges				86.17
	TOTAL				8 703.58
	Add 15% for contractor's profit and overheads				1 305.54
	Cost for 10 metre				10 009.12
	Cost for 1 metre				1 000.91
	Say				1 000.90

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.9 800 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1709	800 mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	836.00	8 360.00
1723	Collars 4 Nos.	each	4.00	146.00	584.00
2303	carriage of pipes	100 metre	10.00	1 938.30	193.83
0367	Cement of 4 joints = 4x0.0072 = 0.0288 cum = 0.042 t	tonne	0.042	4 500.00	189.00
2209	Carriage of cement	tonne	0.042	47.29	1.99
0983	Fine sand for 4 joint = 0.0143x4 = 0.0572 cum = 0.057 cum	cum	0.057	320.00	18.24
2261	Carriage of sand	cum	0.057	53.21	3.03
	LABOUR				
0123	Mason 1st class	Day	1.14	151.50	172.71
0124	Mason 2nd class	Day	1.14	141.60	161.42
0114	Beldar	Day	2.28	135.25	308.37
0101	Bhishti	Day	0.42	138.45	58.15
	TOTAL				10 050.74
	Add 1 % for water charges				100.51
	TOTAL				10 151.25
	Add 15% fo for contractor's profit and overheads				1 522.69
	Cost for 10 metre				11 673.94
	Cost for 1 metre				1 167.39
	Say				1 167.40

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.10 900 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1710	900 mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	986.00	9 860.00
1724	Collars 4 Nos.	each	4.00	178.00	712.00
2331	Carriage of pipes	100 melre	10.00	2 907.45	290.74
0367	Cement of 4 joints = 4x0.0082 = 0.0328 cum = 0.0488 t Say 0.049 t	tonne	0.049	4 500.00	220.50
2209	Carriage of cement	tonne	0.049	47.29	2.32
0983	Fine sand for 4 joint = 0.0164x4 = 0.066 cum	cum	0.66	320.00	211.20
2261	Carriage of sand	cum	0.66	53.21	35.12
	LABOUR				
0123	Mason 1 st class	Day	1.25	151.50	189.38
0124	Mason 2nd class	Day	1.25	141.60	177.00
0114	Beldar	Day	3.00	135.25	405.75
0101	Bhishti	Day	0.50	138.45	69.22
	TOTAL				12 173.23
	Add 1% for water charges				121.73
	TOTAL				12 294.96
	Add 15% for contractor's profit and overheads				1 844.24
	Cost for 10 metre				14 139.20
	Cost for 1 metre				1 413.92
	Say				1 413.90

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.11 1000 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1711	1000 mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	1243.00	12 430.00
1725	Collars 4 Nos.	each	4.00	210.00	840.00
2332	Carriage of pipes	100 metre	10.00	3876.61	387.66
0367	Cement of 4 joints = 4x0.0092 = 0.0368 cum = 0.055 t	tonne	0.055	4 500.00	247.50
2209	Carriage of cement	tonne	0.055	47.29	2.60
6 983	Fine sand for 4 joint = 0.0185x4 = 0.074 cum	cum	0.074	320.00	23.68
2261	Carriage of sand	cum	0.074	53.21	3.94
	LABOUR				
0123	Mason 1 st class	Day	1.36	151.50	206.04
0124	Mason 2nd class	Day	1.36	141.60	192.58
0114	Beldar	Day	4.33	135.25	585.63
0101	Bhishti	Day	0.50	138.45	69.22
	TOTAL				14 988.85
	Add 1% for water charges				149.89
	TOTAL				15 138.74
	Add 15% for contractor's profit and overheads				2 270.81
	Cost for 10 metre				17 409.55
	Cost for 1 metre				1 740.96
	Say				1 740.95

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.12 1100 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1712	1100 mm dia pipe (in 2.5m.length = 4 Nos.)	metre	10.00	1500.00	15000.00
1726	Collars 4 Nos.	each	4.00	241.00	964.00
2333	carnage of pipes	100metre	10.00	3876.61	387.66
0367	Cement of 4 joints = 4x0.0103 =0.0412 cum = 0.061 t	tonne	0.061	4500.00	274.50
2209	Carriage of cement	tonne	0.061	47.29	2.88
0983	Fine sand for 4 joint = 0.0206x4 = 0.0824 cum = 0.082 cum	cum	0.082	320.00	26.24
2261	Carriage of sand	cum	0.082	53.21	4.36
	LABOUR				
0123	Mason 1st class	Day	1.47	151.50	222.70
0124	Mason 2nd class	Day	1.47	141.60	208.15
0114	Beldar	Day	6.30	135.25	852.08
0101	Bhishti	Day	0.60	138.45	83.07
	TOTAL				18 025.64
	Add 1% for water charges				180.26
	TOTAL				18 205.90
	Add 15% for contractor's profit and overheads				2 730.88
	Cost for 10 metre				20 936.78
	Cost for 1 metre				2 093.68
	Say				2 093.70

19.6 Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete :

19.6.13 1200 mm dia. R.C.C. pipe

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metre				
	MATERIALS				
1713	1200 mm dia pipe (in 2.5 m. length = 4 nos.)	metre	10.00	1543.00	15 430.00
1727	Collars 4 Nos	each	4.00	280.00	1120.00
2334	Carriage of pipes	100metre	10.00	3876.61	387.66
0367	Cement of 4 joints = 4x0.0114 = 0.0456 cum = 0.068 t	tonne	0.068	4 500.00	306.00
2209	Carriage of cement	tonne	0.068	47.29	3.22
0983	Fine sand for 4 joint = 0.0229x4 = 0.0916 cum = 0.092 cum	cum	0.092	320.00	29.44
2261	Carriage of sand	cum	0.092	53.21	4.90
	LABOUR				
0123	Mason 1 st class	Day	1.59	151.50	240.89
0124	Mason 2nd class	Day	1.59	141.60	225.14
0114	Beldar	Day	8.67	135.25	1 172.62
0101	Bhishti	Day	0.67	138.45	92.76
	TOTAL				19 012.63
	Add 1% for water charges				190.13
	TOTAL				19 202.76
	Add 15% for contractor's profit and overheads				2 880.41
	Cost for 10 metre				22 083.17
	Cost for 1 metre				2 208.32
	Say				2 208.30

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :

19.7.1 Inside size 90x80 cm and .45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):

19.7.1.1 With F.P.S. bricks with class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.51x1.41x0.20=0.426 cum Say 0.43 cun. Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.43	2449.00	1053.07
	Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 4.32x0.23x0.35 m = 0.348 cum Less for pipe 2x3.14/4x(0.15m)^{2}x0.23m = (-) 0.008 cum = 0.340 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.34	2293.40	779.76
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15 m)^2 = (-) 0.02 cum = 0.16 cum Rate as per item no 4.1.3 of SH : Concrete Work	cum	0.16	3257.45	521.19
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.40mx0.05m = 0.17 sqm 2x^1/2x0.80x0.10m = 0.08 sqm = 0.25 sqm Rate as per item no.13.9.1 of SH : Finishing	sqm	0.25	112.80	25.20
	Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042cum = 0.215 cum Say 0.22 cum Rate as per item no 5.3 of SH : RCC Work	cum	0.22	3673.85	808.25
	Mild steel reinforcement for slab :				

Code	Description	Unit	Quantity	Rate	Amount
	0.22 cum @ 48.06 kg/cum = 10.57 kg				
	Rate as per item no 5.22.1 of SH: RCC Work	kg	10.57	41.50	438.66
	Form work = 0.90x0.80= 0.72 sqm				
	Less cover = 0.61x0.45m = (-) 0.278 sqm				
	=0.42 sqm. say 0.44 sqm.				
	Rate as per item no 5.9.3 of SH : RCC Work	sqm	0.44	187.35	82.43
	LABOUR				
	Extra labour for making channel:				
0123	Mason 1st class	Day	0.06	151.50	9.09 (A)
0124	Mason 2nd class	Day	0.06	141.60	8.50 (A)
1354	C.I. Cover with frame 455x610 mm (inside)	each	1.00	1395.00	1 395.00 (B)
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.00	6.76 (B)
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.00	6.76 (B)
9999	Sundries	L.S.	13.52	1.00	13.52 (B)
	TOTAL				5151.19
	Add 1% for water charges on (A+B)				14.40 (C)
	TOTAL				5165.59
	Add 15% for contractor's profit and overheads on (A+B+C)				218.10
	Cost of one manhole				5 383.69
	Say				5 383.70

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :

19.7.1 Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):

19.7.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole				
	MATERIALS				
	Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)				
	1.51x1.41x0.20m=0.426 cum Say 0.43 cun.				
	Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.43	2 449.00	1 053.07
	Brick work with sewer bricks conforming to IS: 4885.				
	in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand)				
	4.32x0.23x0.35 m = 0.348 cum				
	Less for pipe $2x3.14/4x(0.15m)^2x0.23m$ = (-) 0.008 cum				
	= 0.340 cum				
	Rate as per item no 6.36.1 of SH : Brick Work	cum	0.34	3 048.75	1 036.58
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching				

Code	Description	Unit	Quantity	Rate	Amount
	2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15 m)^2 = (-) 0.02 cum = 0.16 cum				
	Rate as per item no 4.1.3 of SH : Concrete Work	cum	0.16	3257.45	521.19
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.40mx0.05m = 0.17 sqm 2x^1/2x0.80x0.10m = 0.08 sqm = 0.25 sqm				
	Rate as per item no.13.9.1 of SH : Finishing	sqm	0.25	112.80	28.20
	Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042 cum = 0.215 cum Say 0.22 cum				
	Rate as per item no 5.3 of SH : RCC Work	cum	0.22	3673.85	808.25
	Mild steel reinforcement for slab : 0.22 cum @ 48.06 kg/cum = 10.57 kg				
	Rate as per item no 5.22.1 of SH: RCC Work	kg	10.57	41.50	438.66
	Form work = 0.90x0.80= 0.72 sqm =0.442 sqm say 0.44 sqm Less cover = 0.61x0.455m = (-) 0.278 sqm				
	Rate as per item no 5.9.3 of SH : RCC Work	sqm	0.44	187.35	82.43
	LABOUR Extra labour for making channel:				
0123	Mason 1st class	Day	0.06	151.50	9.09 (A)
0124	Mason 2nd class	Day	0.06	141.60	8.50 (A)
1354	C.I. Cover with frame 455x610 mm (inside)	each	1.00	1395.00	1 395.00 (B)
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.00	6.76 (B)
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.00	6.76 (B)
9999	Sundries	L.S.	13.52	1.00	13.52 (B)
	TOTAL				5408.01
	Add 1% for water charges on (A+B)				14.40 (C)
	TOTAL				5422.41
	Add 15% for contractor's profit and overheads on (A+B+C)				218.10
	Cost of one manhole				5 640.51
	Say				5 640.50

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :

19.7.2 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg):

19.7.2.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole				
	MATERIALS				
	Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)				
	1.81x1.51x0.20m=0.547 cum Say 0.55 cun.				
	Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.55	2 449.00	1 346.95
	Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand)				
	5.12x0.23x0.80 m = 0.942 cum				
	Less for pipe 2x3.14/4x(0.15m)^{2}x0.23m = (-) 0.008 cum				
	= 0.934 cum say 0.93 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.93	2 293.40	2 132.86
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching				
	2x1.20x(0.90x10.30/2) x (0.30+0.20)/2 = 0.270 cum				
	Less for pipe 1.20x3.14/4x(0.15 m)^2 = (-) 0.021 cum				
	= 0.249 cum say 0.25 cum.				
	Rate as per item no 4.1.3 of SH : Concrete Work	cum	0.25	3 257.45	814.36
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	4.20mx0.50m = 2.10 sqm				
	2x^1/2x0.90x0.10m = 0.08 sqm				
	Total				
	= 2.19 sqm				
	Rate as per item no.13.9.1 of SH : Finishing	sqm	2.19	112.80	247.03
	Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	For slab: 1.66x1.36x0.15m = 0.339 cum				
	Less for cover 0.7854x(0.50)^{2}x0.15m = (-) 0.029 cum				
	= 0.31cum				
	Rate as per item no 5.3 of SH : RCC Work	cum	0.31	3 673.85	1 138.89
	Mild steel reinforcement for slab :				
	0.31 cum @ 48.06 kg/cum = 24.83 kg				
	Rate as per item no 5.22.1 of SH: RCC Work	kg	24.83	41.50	1 030.44
	Form work = 1.20x0.90= 1.08 sqm				
	Less cover = 3.14/4x(0.50)^2=(-) 0.196 sqm				
	= 0.884 sqm Say 0.88 sqm				
	Rate as per item no 5.9.3 of SH : RCC Work	sqm	0.88	187.35	164.87
	LABOUR				
	Extra labour for making channel:				
0123	Mason 1st class	Day	0.08	151.50	12.12 (A)
0124	Mason 2nd class	Day	0.08	141.60	11.33 (A)
1356	C.I. Cover with frame 500 mm (inside)	each	1.00	4 257.00	4 257.00 (B)
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.00	6.76 (B)
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.00	6.76 (B)

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	16.64	1.00	16.64 (B)
	TOTAL				11 186.01
	Add 1% for water charges on (A+B)				43.11 (C)
	TOTAL				11 229.12
	Add 15% for contractor's profit and overheads on (A+B+C)				653.06
	Cost of one manhole				11 882.18
	Say				11 882.20

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :

19.7.2 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg):

19.7.2.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole				
	MATERIALS				
	Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)				
	1.81x1.51x0.20m=0.547 cum Say 0.55 cun.				
	Rate as per item no 4.1.8 of SH : Concrete Work	cum	0.55	2 449.00	1 346.95
	Brick work with sewer bricks conforming to IS: 4885. in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand)				
	5.12x0.23x0.80 m = 0.942 cum				
	Less for pipe $2x3.14/4x(0.15m)^2x0.23m$ = (-) 0.008 cum				
	= 0.934 cum say 0.93 cum				
	Rate as per item no 6.36.1 of SH : Brick Work	cum	0.93	3 048.75	2 835.34
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching				
	2x1.20x0.90x(0.80/2) x (0.30+0.20)/2 = 0.270 cum				
	Less for pipe $1.20x3.14/4x(0.15\ m)^2$ = (-) 0.021 cum				
	= 0.249 cum say 0.25 cum				
	Rate as per item no 4.1.3 of SH : Concrete Work	cum	0.25	3 257.45	814.36
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	4.20mx0.50m = 2.10 sqm				
	$2x^1/2x0.90x0.10m$ = 0.08 sqm				
	= 2.19 sqm				

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no.13.9.1 of SH : Finishing Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.66x1.36x0.15m = 0.339 cum Less for cover 0.7854x$(0.50)^2$x0.15m = (-) 0.029 cum = 0.31cum	sqm	2.19	112.80	247.03
	Rate as per item no 5.3 of SH : RCC Work Mild steel reinforcement for slab : 0.31 cum @ 48.06 kg/cum = 24.83 kg	cum	0.31	3673.85	1138.89
	Rate as per item no 5.22.1 of SH: RCC Work Form work = 1.20x0.90= 1.08 sqm Less cover = 3.14/4x$(0.50)^2$=(-) 0.196 sqm = 0.884 sqm Say 0.88 sqm	kg	24.83	41.50	1030.44
	Rate as per item no 5.9.3 of SH : RCC Work LABOUR Extra labour for making channel:	sqm	0.88	187.35	164.87
0123	Mason 1st class	Day	0.08	151.50	12.12 (A)
0124	Mason 2nd class	Day	0.08	141.60	11.33 (A)
1356	C.I. Cover with frame 500 mm (inside)	each	1.00	4 257.00	4 257.00 (B)
9999	Carriage of C.I. cover & frame	L.S.	6.76	1.00	6.76 (B)
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.00	6.76 (B)
9999	Sundries	L.S.	16.64	1.00	16.64 (B)
	TOTAL				11 888.49
	Add 1% for water charges on (A+B)				43.11 (C)
	TOTAL				11 931.60
	Add 15% for contractor's profit and overheads on (A+B+C)				653.06
	Cost of one manhole				12 584.66
	Say				12 584.65

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation_concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design : ,

19.7.3 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg)

19.7.3.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20m=0.547 cum Say 0.55 cun.				
	Rate as per item no 4.1.8 of SH : Concrete Work Brick work with bricks of class designation 75 in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand)	cum	0.55	2 449.00	1 346.95

Code	Description	Unit	Quantity	Rate	Amount
	5.12x0.23x0.65 m = 0.765 cum 1x0.56x0.23x0.15 m =0.019 cum 1x0.79x0.23x0.15 = 0.027 cum =0.811 Less for pipe 2x3.14/4x(0.15m)^{2}x0.23m = (-) 0.008 cum = 0.803 cum say 0.80 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.80	2 293.40	1 834.72
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2)x(0.30+0.20)/2 = 0.270 cum Less for pipe 1.20x3.14/4x(0.15 m)^2 = (-) 0.021 cum = 0.249 cum say 0.25 cum				
	Rate as per item no 4.1.3 of SH : Concrete Work	cum	0.25	3 257.45	814.36
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20mx0.35m = 1.47 sqm 2x0.56x0.15m = 0.17 sqm 2x1/2x0.90x0.10m = 0.09 sqm For fixing cover 0.96x0.96 m =0.922 sqm 2.652 sqm Less cover 3.14/4x(0.56)^2=(-) 0.246 sqm =2.406 sqm Say 2.41 sqm				
	Rate as per item no.13.9.1 of SH : Finishing	sqm	2.41	112.80	271.85
	Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For slab: 1.66x1.36x0.15m = 0.339 cum Add extra concreting 1x(0.56+0.79)x0.15x0.15 m=0.03 cum =0.369 cum Less for cover 0.7854x(0.50)^{2}x0.15m = (-) 0.037 cum = 0.332 cum Say 0.33 cum				
	Rate as per item no 5.3 of SH : RCC Work	cum	0.33	3 673.85	1 212.37
	Steel reinforcement for slab @ 80.9 Kg/cum For 0.33 cum = 26.43 kg.				
	Rate as per item no 5.22.1 of SH: RCC Work	kg	26.43	41.50	1 096.84
	Form work inside area of man-hole 1.20x0.90 =1.08 Less cover = 3.14/4x(0.56)^2=(-) 0.246 sqm = 0.834 sqm Say 0.88 sqm				
	Rate as per item no 5.9.3 of SH : RCC Work	sqm	0.83	187.35	155.50
	LABOUR Extra labour for making channel:				
0123	Mason 1st class	Day	0.08	151.50	12.12 (A)
0124	Mason 2nd class	Day	0.08	141.60	11.33 (A)
3860	C.I. Cover with frame 560 dia	each	1.00	7 634.00	7 634.00 (B)
9999	Carriage of C.I. cover & frame	L.S.	13.52	1.00	13.52(B)
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.00	6.76 (B)
9999	Sundries	L.S.	20.28	1.00	20.28 (B)
	TOTAL				14430.60

,Code	Description	Unit	Quantity	Rate	Amount
	Add 1% for water charges on (A+B) TOTAL Add 15% for contractor's profit and overheads on (A+B+C) Cost of one manhole Say				76.98 (C) 14 507.58 1 166.25 15 673.83 15 673.85

19.7 Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :

19.7.3 Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg)

19.7.3.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:4:8 (1 cement: 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 1.81x1.51x0.20m=0.547 cum Say 0.55 cun. Rate as per item no 4.1.8 of SH : Concrete Work Sewer Brick conforming to IS: 4885. in foundation & plinth in cement mortar 1:4 (1 cement: 4 coarse sand) 5.12x0.23x0.65 m = 0.765 cum 1x0.56x0.23x0.15 m =0.019 cum 1x0.79x0.23x0.15 = 0.027 cum =0.811 Less for pipe 2x3.14/4x(0.15m)^{2}x0.23m = (-) 0.008 cum = 0.803 cum say 0.80 cum Rate as per item no 6.36.1 of SH : Brick Work Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) for benching 2x1.20x(0.90/2)x(0.30+0.20)/2 = 0.270 cum Less for pipe 1.20x3.14/4x(0.15 m)^2 = (-) 0.021 cum = 0.249 cum say 0.25 Rate as per item no 4.1.3 of SH : Concrete Work 12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20mx0.35m = 1.47 sqm 2x0.56x0.15m = 0.17 sqm 2x1/2x0.90x0.10m = 0.09 sqm For fixing cover 0.96x0.96 m =0.922 sqm = 2.652 sqm	cum cum cum	0.55 0.80 0.25	2 449.00 3 048.75 3 257.45	1 346.95 2 439.00 814.36

Code	Description	Unit	Quantity	Rate	Amount
	Less cover 3.14/4x(0.56)^2=(-) 0.246 sqm =2.406 sqm Say 2.41 sqm				
	Rate as per item no.13.9.1 of SH : Finishing	sqm	2.41	112.80	271.85
	Reinforced cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	For slab: 1.66x1.36x0.15m = 0.339 cum				
	Add extra concreting 1x(0.56+0.79)x0.15x0.15 m=0.03 cum =0.369 cum				
	Less for cover 0.7854x(0.50)^{2}x0.15m = (-) 0.037 cum = 0.332 cum Say 0.33 cum				
	Rate as per item no 5.3 of SH : RCC Work	cum	0.33	3673.85	1212.37
	Steel reinforcement for slab @ 80.9 Kg/cum For 0.33 cum = 26.43				
	Rate as per item no 5.22.1 of SH: RCC Work	kg	26.43	41.50	1096.84
	Form work inside area of man-hole 1.20x0.90 =1.08				
	Less cover = 3.14/4x(0.56)^2=(-) 0.246 sqm = 0.834 sqm Say 0.88 sqm				
	Rate as per item no 5.9.3 of SH : RCC Work	sqm	0.83	187.35	155.50
	LABOUR				
	Extra labour for making channel:				
0123	Mason 1st class	Day	0.08	151.50	12.12 (A)
0124	Mason 2nd class	Day	0.08	141.60	11.33 (A)
3860	C.I. Cover with frame 560 dia	each	1.00	7634.00	7 634.00 (B)
9999	Carriage of C.I. cover & frame	L.S.	13.52	1.00	13.52(B)
9999	Painting of C.I. cover & frame with coal tar	L.S.	6.76	1.00	6.76 (B)
9999	Sundries	L.S.	20.28	1.00	20.28 (B)
	TOTAL				15 034.88
	Add 1% for water charges on (A+B)				76.98 (C)
	TOTAL				15 111.86
	Add 15% for contractor's profit and overheads on (A+B+C)				1 166.25
	Cost of one manhole				16 278.11
	Say				16 278.10

19.8 Extra for depth for manholes
19.8.1 Size 90x80 cm
19.8.1.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one meter				
	MATERIALS				
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement : 4 coarse sand)				
	4.32x0.23x1.00 = 0.994 cum Say 0.99				
	Rate as per item no. 6.1.1 of S.H : brick work	cum	0.99	2293.40	2 270.47
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	3.40x1 m = 3.40 sqm				
	Rate as per item no. 13.9.1 of SH : Finishing	sqm	3.40	112.80	383.52
	TOTAL				2 653.99
	Cost for one metre				2 653.99
	Say				2 654.00

19.8 Extra for depth for manholes
19.8.1 Size 90x80 cm
19.8.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one meter				
	MATERIALS				
	Brick work with modular extruded burnt fire clay sewer bricks in cement mortar 1:4(1 cement : 4 coarse sand) 1x4.32x0.23x1.0 = 0.994 say 0.99 cum				
	Rate as per item No 6.36.1 of SH : Brick Work	cum	0.99	3 048.75	3 018.26
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.40x1 m = 3.40 sqm				
	Rate as per item no. 13.9.1 of SH : Finishing	sqm	3.40	112.80	383.52
	TOTAL				3 401.78
	Cost for one metre				3 401.78
	Say				3 401.78

19.8 Extra for depth for manholes
19.8.2 Size 120x90 cm
19.8.2.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one meter				
	MATERIALS				
	Brick work with modular extruded burnt fire clay sewer bricks in cement mortar 1:4(1 cement : 4 coarse sand) 5.12x0.23x1.0 = 1.178 say 1.18 cum				
	Rate as per item No 6.1.1 of SH : Brick Work	cum	1.18	2 293.40	2 706.21
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20x1 m = 4.20 sqm				
	Rate as per item no. 13.9.1 of SH : Finishing	sqm	4.20	112.80	473.76
	TOTAL				3 179.97
	Cost for one metre				3 179.97
	Say				3 179.95

19.8 Extra for depth for manholes
19.8.2 Size 120x90 cm
19.8.2.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one meter				
	MATERIALS				
	Brick work with modular extruded burnt fire clay sewer bricks in cement mortar 1:4 (1 cement : 4 coarse 5.12x0.23x1.00=1.178 say 1.18 cum				
	Rate as per item No 6.36.1 of SH : Brick Work	cum	1.18	3 048.75	3 597.52

Code	Description	Unit	Quantity	Rate	Amount
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 4.20x1 m = 4.20sqm Rate as per item no. 13.9.1 of sub head finishing TOTAL Cost for one metre Say	sqm	4.20	112.80	473.76 4 071.28 4 071.28 4 071.30

19.9 Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at/in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design :

19.9.1 0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total-weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately):

19.9.1.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.67x1.67x0.225 = 0.63cum. Rate as per item no 4.1.6 SH: Concrete work Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand) Curved on plan 3.14x1.14x0.074x0.23=0.061 $3.14x(1.14+0.79)^2x0.711x0.23$ = 0.496 = 0.557 Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.230x0.10 m = 0.018 cum $2x3.14/4x(0.15)^2x0.230$ = 0.008 cum = 0.026 cum Net quantity 0.557-0.026 = 0.531 Say 0.53 Rate as per item no 6.1.1 of SH : Brick Work Brick work in arches with 75 class designation brick in cement mortar 1:3 (1 cement: 3 coarse sand) 2x½x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum Rate as per item no 6.9 of SH: Brick Work	cum cum cum	0.63 0.53 0.02	2 713.05 2 293.40 3 847.45	1 709.22 1 215.50 76.95

Code	Description	Unit	Quantity	Rate	Amount
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x(0.91+0.82)^{2}x0.20 = 0.118 cum [(2x8.133)/360]x(4/3)x3.14x(0.45)^3 =0.017 cum = 0.135 cum Less pipe : 0.91x3.14/4x(0.15)^2 = (-) 0.016 cum = 0.119 cum Say 0.12 cum	cum	0.12	3 257.45	390.89
	Rate as per item no. 4.1.3 of SH : concrete Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^{2}x thickness 0.7854x1.020x1.020x0.15 m =0.123 cum Less cover 3.14/4x(0.28)2 x 0.15 m = (-) 0.037 cum = 0.086 cum Say 0.09 cum	cum	0.09	3 579.10	322.12
	Rate as per item no 4.2.3 of SH : Concrete work 12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(0.80+0.56)/2x0.49 = 1.05 sqm 3.14x0.56x0.075 = 0.13 sqm ‘ Benching 3.14x(0.80)^2/4-0.80x0.15+0.80x½x3.14x0.15 = 0.57 sqm = 1.75 sqm	sqm	1.75	112.80	197.40
	Extra labour for making channel:				
0123	Mason 1st class	Day	0.06	151.50	9.09(A)
0124	Mason 2nd class	Day	0.06	141.60	8.50(A)
7135	S.F.R.C cover 560 mm dia with fram (heavy duty)	each	1.00	838.00	838.00 (A)
9999	Carriage	L.S.	6.89	1.00	6.89 (A)
9999	Sundries	L.S.	16.90	1.00	16.90 (A)
	TOTAL				4 791.46
	Add 1 % for water charges on (A)				8.79 (C)
	TOTAL				4 800.25
	Add 15% for contractor’s profit and overheads on (A+B)				133.23
	Cost of one manhole				4 933.48
	Say				4 933.50

19.9 Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design:

19.9.1 0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately):

19.9.1.2 With Sewer bricks conforming to IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.67x1.67x0.225 = 0.63cum. Rate as per item no 4.1.6 of SH : Concrete work	cum	0.63	2 713.05	1 709.22
	Brick work with moduler extruded burnt fire clay sewer bricks in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.14x0.074x0.23 =0.061 3.14x(1.14+0.79)/2x0.711x0.23 = 0.496 = 0.557 Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x$(0.15)^2$x0.230 = 0.008 cum = 0.026 cum Net quantity 0.557-0.026 = 0.531 Say 0.53 Rate as per item No 6.36.1 of SH : Brick Work	cum	0.53	3 048.75	1 615.84
	Brick work moduler extruded burnt fire clay sewer bricks in arches brick in cement mortar 1:3 (1 cement: 3 coarse sand) 2x½x3.14x0.25m x0.230x0.10 m = 0.018 cum Say 0.02 cum Rate as per item No 6.37 of SH : Brick Work	cum	0.02	4 550.30	91.01
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x$(0.91+0.82)^2$x0.20 = 0.118 cum [(2x8.133)/360]x(4/3)x3.14x$(0.45)^3$ =0.017 cum = 0.135 cum Less pipe : 0.91x3.14/4x$(0.15)^2$= (-) 0.016 cum = 0.119 cum Say 0.12 cum Rate as per item no. 4.1.3 of SH : concrete work	cum	0.12	3 257.45	390.89
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^2x thickness 0.7854x1.020x1.020x0.15 m =0.123 cum Less cover 3.14/4x$(0.28)^2$ x 0.15 m = (-) 0.037 cum = 0.086 cum Say 0.09 cum Rate as per item no 4.2.3 of SH : Concrete	cum	0.09	3 579.10	322.12

Code	Description	Unit	Quantity	Rate	Amount
	12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(0.80+0.56)/2x0.49 = 1.05 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(0.80)²/4-0.80x0.15+0.80x'/2x3.14x0.15 = 0.57 sqm = 1.75 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	1.75	112.80	197.40
	LABOUR Extra labour for making channel:				
0123	Mason 1st class	Day	0.06	151.50	9.09 (A)
0124	Mason 2nd class	Day	0.06	141.60	8.50 (A)
7135	S.F.R.C cover 560 mm dia with fram (heavy duty)	each	1.00	838.00	838.00 (A)
9999	Carriage	L.S.	6.89	1.00	6.89 (A)
9999	Sundries	L.S.	16.90	1.00	16.90 (A)
	TOTAL				5 205.86
	Add 1% for water charges on (A)				8.79 (B)
	TOTAL				5 214.65
	Add 15% for contractor's profit and overheads on (A+B)				133.23
	Cost of one manhole				5 347.88
	Say				5 347.90

19.10 Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91m to 1.67m

19.10.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of Cost for 0.76m depth. Bricks work in arches with 75 class designation bricks in cement montar 1:3 (1 cement : 3 coarse sand)				
	(Rate as per item no. 6.9 SH:- Brick work)	cum	0.63	2 293.40	1 444.84
	cement concrete 1:2:4(1 cement :2 coarse sand :4 graded stone aggregate 20mm nominal size)				
	(Rate as per item no. 4.1.3)	cum	0.01	3 257.45	32.57
	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with neat cement.				
	(Rate as per item no. 13.9.1)	sqm	2.33	112.80	262.82
	Cost for 0.76 m depth				1 740.23
	Cost for 1m depth				2 289.78
	Say				2 289.80

19.10 Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91m to 1.67m

19.10.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of Cost for 0.76m extra depth. Brick work with modular exturded burnt fire clay bricks				

Code	Description	Unit	Quantity	Rate	Amount
	in cement montar 1:4 (1 cement : 4 coarse sand)				
	(Rate as per item no. 6.36.1 Brick work)	cum	0.63	3 048.75	1920.71
	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	(Rate as per item no. 4.1.3 - SH:- Concrete)	cum	0.01	3 257.45	32.57
	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement.				
	(Rate as per item no. 13.9.1 finishing)	sqm	2.33	112.80	262.82
	Cost for 0.76m extra depth				2 216.10
	Cost for 1m extra depth				2 915.92
	Say				2 915.90

19.11 Constructing brick masonry circular manhole 1.22m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement :3 coarse sand) finished with a floating coat of neat cement^foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design :

19.11.1 1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately):

19.11.1.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.98x1.98x0.30 = 1.178 say 1.18 cum.				
	Rate as per item no 4.1.6 of SH : Concrete work	cum	1.18	2 713.05	3 201.40
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23 = 0.251 3.14x(1.45+0.79)/2x 1.32x0.23= 1.069 = 1.320 Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x$(0.15)^2$x0.230 = 0.008 cum = 0.026 cum Net quantity 1.320-0.026 = 1.294 Say 1.29 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	1.29	2 293.40	2 958.49
	Brick work in arches with 75 class designation brick in cement mortar 1:3(1 cement: 3 coarse sand)				

Code	Description	Unit	Quantity	Rate	Amount
	2x½x3.14x0.25 m x0.230x0.10 m = 0.018cum Say 0.02 cum				
	Rate as per item no 6.9 of SH : Brick Work	cum	0.02	3 847.45	76.95
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x(1.22)2x0.20 = 0.234 cum [(2x8.133)/360]x(4/3)x3.14x$(0.61)^3$ =0.043 cum = 0.277 cum				
	Less pipe : 1.22x3.14/4x$(0.15)^2$(-) = 0.0216 cum = 0.2554 cum Say 0.26 cum				
	Rate as per item no. 4.1.3 of SH : concrete work	cum	0.26	3 257.45	846.94
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^2x thickness 0.7854x1.020x1.020x0.15 m =0.123 cum Less cover 3.14/4x$(0.28)^2$ x 0.15 m : (-) = 0.037 cum = 0.086 cum Say 0.09 cum				
	Rate as per item no 4.2.3 ofSH : Concrete work	cum	0.09	3 579.10	322.12
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.136+0.56)/2x1.216 = 3.241 sqm 3.14x0.56x0.075 = 0.13 sqm 3.14x$(1.136)^2$/4-1.136x1/2x3.14x0.15= 1.112 sqm = 4.483 sqm Say 4.48 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	4.48	112.80	505.34
	LABOUR				
	Extra labour for making channel:				
0123	Mason 1st class	Day	0.10	151.50	15.15 (A)
0124	Mason 2nd class	Day	0.10	141.60	14.16 (A)
7135	S.F.R.C manhole cover and 560 mm dia	each	1.00	838.00	838.00 (A)
9999	Carriage	L.S.	6.89	1.00	6.89 (A)
9999	Sundries	L.S.	16.90	1.00	16.90 (A)
	TOTAL				8 802.34
	Add 1% for water charges on (A)				8.91 (B)
	TOTAL				8 811.25
	Add 15% for contractor's profit and overheads on (A+B)				135.00
	Cost of one manhole				8 946.25
	Say				8 946.25

19.11 Constructing brick masonry circular manhole 1.22m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement :3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design:

19.11.1 1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately):

19.11.1.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 1.98x1.98x0.30 = 1.178 say 1.18 cum. Rate as per item no 4.1 .6 of SH : Concrete work	cum	1.18	2 713.05	3 201.40
	Brick work modular exturded burnt fire ash clay in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23 = 0.251 3.14x(1.45+0.79)/2x1.32x0.23 = 1.069 = 1.320 Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.230x0.10 m = 0.018 cum 2x3.14/4x$(0.15)^2$ x0.230 = 0.008 cum = 0.026 cum Net quantity 1.320-0.026 = 1.294 Say 1.29 cum Rate as per item no 6.36.1 of SH : Brick Work	cum	1.29	3 048.75	3 932.89
	Brick work with modular exturded burnt ash clay brick in arches cement mortar 1:3(1 cement: 3 coarse sand) 2x1/2x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum Rate as per item No 6.37 of SH : Brick Work	cum	0.02	4 550.30	91.01
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x$(1.22)^2$x0.20 = 0.234 cum [(2x8.133)/360]x(4/3)x3.14x$(0.61)^3$ =0.043 cum = 0.277 cum Less pipe : 1.22x3.14/4x$(0.15)^2$ (-) = 0.0216 cum = 0.2554 cum Say 0.26 cum Rate as per item no. 4.1.3 of SH : concrete work	cum	0.26	3 257.45	846.94
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4xd^2x thickness 0.7854x1.020x1.020x0.15 m =0.123 cum Less cover 3.14/4x$(0.28)^2$ x 0.15 m : (-) = 0.037 cum = 0.086 cum Say 0.09 cum Rate as per item no 4.2.3 of SH : Concrete work	cum	0.09	3 579.10	322.12
	12 mm cement plaster 1:3 (1 cement: 3 coarse				

Code	Description	Unit	Quantity	Rate	Amount
	sand) finished with floating coat of neat cement 3.14x(1.136+0.56)/2x1.216 = 3.241 sqm 3.14x0.56x0.075 = 0.13 sqm 3.14x(l.136)²/4-1.136x1/2x3.14x0.15 = 1.112 sqm = 4.483 sqm Say 4.48 sqm Rate as per item no 13.9.1 of SH : Finishing	sqm	4.48	112.80	505.34
	LABOUR Extra labour for making channel:				
0123	Mason 1st class	Day	0.10	151.50	15.15 (A)
0124	Mason 2nd class	Day	0.0610	141.60	14.16 (A)
7135	S.F.R.C manhole cover and frame 560 mm dia	each	1.00	838.00	838.00 (A)
9999	Carriage	L.S.	6.89	1.00	6.89 (A)
9999	Sundries	L.S.	16.90	1.00	16.90 (A)
	TOTAL				9 790.80
	Add 1% for water charges on (A+B)				8.91 (B)
	TOTAL				9 799.71
	Add 15% for contractor's profit and overheads on (A+B+C)				135.00
	Cost of one manhole				9 934.71
	Say				9 934.70

19.12 Extra depth for circular type manhole 1.22m internal dia (at bottom) beyond 1.68 m to 2.29 m :

19.12.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of Cost for 0.61m extra depth. Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) (Rate as per item no. 6.1.1 SH:-Brick Work)	cum	0.66	2 293.40	1 513.64
	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement. (Rate as per item no. 13.9.1 SH:- finishing)	sqm	2.56	112.80	288.77
	Cost for 0.61 m extra depth				1802.41
	Cost for 1m extra depth				2 954.77
	Say				2 954.75

19.12 Extra depth for circular type manhole 1.22m internal dia (at bottom) beyond 1.68 m to 2.29 m :

19.12.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of Cost for 0.61m extra depth. Brick work with modular exturded burnt fire clay bricks in cement montar 1:4 (1 cement : 4 coarse sand) (Rate as per item no. 6.36.1 SH:-Brick Work)	cum	0.66	3 048.75	2 012.18
	12mm cement plaster 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement. (Rate as per item no. 13.9.1 SH:- finishing)	sqm	2.56	112.80	288.77
	Cost for 0.61 m extra depth				2 300.95
	Cost for 1m extra depth				3 772.05

19.13 Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design :

19.13.1 2.30m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately):

19.13.1.1 With F.P.S. bricks class designation 75

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) '2.74x2.74x0.30=2.25cum				
	Rate as per item no 4.1.6 of SH : Concrete work	cum	2.25	2 713.05	6 104.36
	Brick work with bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) Curved on plan 3.14x1.98x0.25x0.46 = 0.716 cum 3.14x(1.98+0.905)/2x0.345xl.93 = 3.019 cum = 3.735 cum Duduct arch ring and portion of pipe 2x½x3.14x0.25mx0.46x0.10 m = 0.036 cum 2x3.14/4x$(0.15)^2$x0.460 = 0.016 cum = 0.052 cum Net quantity 3.735-0.052 = 3.683 cum Say 3.68 cum				
	Rate as per item no 6.1.1of SH : Brick Work	cum	3.68	2 293.40	8 439.71
	Brick work in arches with 75 class designation brick in cement mortar 1:3(1 cement: 3 fine sand) 2x1/2x3.14x0.25 m x0.460x0.10 m = 0.036 cum Say 0.04 cum				
	Rate as per item no 6.9 of SH : Brick Work	cum	0.04	3 847.45	153.90
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: 3.14/4x(l.52)2x0.20 = 0.363 cum [(2x8.133)/360]x(4/3)x3.14x$(0.76)^3$=0.083 cum = 0.446 cum Less pipe : 1.52x3.14/4x$(0.15)^2$(-) = 0.027 cum = 0.419 cum Say 0.42 cum				
	Rate as per item no. 4.1.3 of SH : concrete work	cum	0.42	3 257.45	1 368.13
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^2x thickness				

Code	Description	Unit	Quantity	Rate	Amount
	0.7854x1.020x1.020x0.15 m =0.123 cum Less cover 3.14/4x(0.28)^2 x 0.15 m : (-) = 0.037 cum = 0.086 cum Say 0.09 cum				
	Rate as per item no 4.2.3 SH : Concrete work 12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.454+0.56)/2xl.799 = 5.694 sqm 3.14x0.56x0.075 = 0.13 sqm Benching 3.14x(1.454)^2 4-1.454x0.15+1.454x1/2x3.14x 0.15 =1.786 sqm = 7.61 sqm	cum	0.09	3 579.10	322.12
	Rate as per item no 13.9.1 of SH : Finishing	sqm	7.61	112.80	858.41
	LABOUR Extra labour for making channel:				
0123	Mason 1st class	Day	0.10	151.50	15.15(A)
0124	Mason 2nd class	Day	0.10	141.60	14.16(A)
7135	S.F.R.C cover 560 mm dia HD-20	each	1.00	838.00	838.00(A)
9999	Carriage	L.S.	6.89	1.00	6.89(A)
9999	Sundries	L.S.	16.90	1.00	16.90(A)
	TOTAL				18 137.73
	Add 1 % for water charges on (A)				8.91(B)
	TOTAL				18 146.64
	Add 15% for contractor's profit and overheads on (A+B)				135.00
	Cost of one manhole				18 281.64
	Say				18 281.60

19.13 Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design :

19.13.1 2.30m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately):

19.13.1.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 manhole MATERIALS Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) 2.74x2.74x0.30=2.25cum				
	Rate as per item no 4.6 of SH : Concrete work	cum	2.25	2 713.05	6 104.36

Code	Description	Unit	Quantity	Rate	Amount
	Brick work with modular exturded burnt fly ash clay bricks in arches in cement mortar 1:4 (1 cement: 4 coarse sand) Curved on plan 3.14x1.98x0.25x0.46 = 0.716 cum 3.14x(1.98+0.905)/2x0.345xl.93 = 3.019 cum = 3.735 cum Duduct arch ring and portion of pipe $2x^1/_2x3.14x0.25mx0.46x0.10$ m = 0.036 cum $2x3.14/4x(0.15)^2x0.460$ = 0.016 cum = 0.052 cum Net quantity 3.735-0.052 = 3.683 cum Say 3.68 cum				
	Rate as per item no 6.36.1 of SH : Brick Work	cum	3.68	3 048.75	11 219.40
	Brick work with modular exturded burnt fly ash clay bricks in arches in cement mortar 1:3 (1 cement: 3 sand) 2x1/2x3.14x0.25 m x0.460x0.10 m = 0.036 cum Say 0.04 cum				
	Rate as per item No6.37 of SH : Brick Work	cum	0.04	4 550.30	182.01
	Cement concrete 1:2:4(1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching: $3.14/4x(1.52)^2x0.20$ = 0.363 cum $[(2x8.133)/360]x(4/3)x3.14x(0.76)^3$ =0.083 cum = 0.446 cum Less pipe : 1.52x3.14/4x(0.15)K-) = 0.027 cum = 0.419 cum Say 0.42 cum				
	Rate as per item no. 4.1.3 of SH : concrete work	cum	0.42	3 257.45	1 368.13
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For fixing cover : 3.14/4 x d^2 thickness 0.7854x1.020x1.020x0.15 m =0.123 cum Less cover $3.14/4x(0.28)^2x$ 0.15 m : (-) = 0.037 cum = 0.086 cum Say 0.09 cum				
	Rate as per item no 4.2.3 of SH : Concrete work	cum	0.09	3 579.10	322.12
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement 3.14x(1.454+0.56)/2xl.799 = 5.694 sqm 3.14x0.56x0.075 = 0.13 sqm Benching $3.14x(1.454)^24$-l. 454x0.15+1.454x1/2x3.14x 0.15 =1.786 sqm = 7.61 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	7.61	112.80	858.41
	LABOUR Extra labour for making channel :				
0123	Mason 1st class	Day	0.10	151.50	15.15(A)
0124	Mason 2nd class	Day	0.10	141.60	14.16(A)

Code	Description	Unit	Quantity	Rate	Amount
7135	S.F.R.C cover 560 mm dia HD-20	each	1.00	838.00	838.00(A)
9999	Carriage	L.S.	6.89	1.00	6.89(A)
9999	Sundries	L.S.	16.90	1.00	16.90(A)
	TOTAL				20 945.53
	Add 1 % for water charges on (A)				8.91(B)
	TOTAL				20 954.44
	Add 15% for contractor's profit and overheads on(A+B)				135.00
	Cost of one manhole				21 089.44
	Say				21 089.40

19.14 Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m:
19.14.1 With F.P.S bricks class desigantion

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.88 m extra depth				
	Brick work with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand)				
	(Rate as per item no 6.1.1 of SH : Brick Work)	cum	5.26	2 293.40	12 063.28
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	(Rate as per item no 13.9.1 of SH : finishing)	sqm	8.99	112.80	1014.07
	Cost for 1.88m extra depth				1 3077.35
	Cost for 1 m extra depth				6 956.04
	Say				6 956.05

19.14 Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m :
19.14.2 With Sewer bricks conforming IS : 4885

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.88 m extra depth				
	Brick work with modular exturded burnt fly ash bricks in cement mortar 1:4 (1 cement: 4 coarse sand)				
	(Rate as per item no 6.36.1 of SH : Brick Work)	cum	5.26	3048.75	16 036.43
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	(Rate as per item no 13.9.1 of SH : finishing)	sqm	8.99	112.80	1014.07
	Cost for 1.88m extra depth				17 050.50
	Cost for 1.00 m extra depth				9 069.41
	Say				9 069.40

19.15 Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :
19.15.1 With 20x20 mm square bar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one M.S foot rests				
	MATERIALS				
1006	M.S. 20 mm square bar 0.75 m @ 3.137 Kg/m	quintal	0.024	3 175.00	76.20
9999	Carriage painting and other sundries	L.S.	1.82	1.00	1.82
	LABOUR for fabrication				

Code	Description	Unit	Quantity	Rate	Amount
0103	Black smith (2 nd class)	Day	0.10	141.60	14.16
0114	Beldar	Day	0.10	135.25	13.52
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.20x0.20x0.10 m = 0.004 cum				
	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	3 112.70	12.45(A)
	LABOUR for fixing M.S. foot rests				
0123	Mason 1st class	Day	0.02	151.50	3.03
0124	Mason 2nd class	Day	0.02	141.60	2.83
0114	Beldar	Day	0.05	135.25	6.76
	TOTAL				130.77
	Add 1% for water charges on all except 'A'				1.18
	TOTAL				131.95
	Add 15% for contractor's profit and overheads on all except 'A'				17.92
	Cost for 1 no.				149.87
	Say				149.85

19.15 Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :

19.15.2 With 20 mm diameter round bar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one M.S foot rests				
	MATERIALS				
1003	M.S. round brass20 mm dia 0.75 m @ 2.47kg 1 m = 0.018 Qq.	quintal	0.018	3050.00	54.90
9999	Carriage	L.S.	1.82	1.00	1.82
	Labour for fabrication				
0103	Black smith (2 nd class)	Day	0.10	141.60	14.16
0114	Beldar	Day	0.10	135.25	13.52
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) 0.20x0.20x0.10 m = 0.004 cum				
	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	3112.70	12.45(A)
	LABOUR				
0123	Mason 1st class	Day	0.02	151.50	3.03
0124	Mason 2nd class	Day	0.02	141.60	2.83
0114	Beldar	Day	0.05	135.25	6.76
	TOTAL				109.47
	Add 1 % for water charges on all except 'A'				0.97
	TOTAL				110.44
	Add 15% for contractor's profit and overheads on all except 'A'				14.70
	Cost for 1 no.				125.14
	Say				125.15

19.16 Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per

standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7354	Plastic encapsulated M.S. foot rest 30x20x15	each	1.00	93.00	93.00
9999	Carriage and other sundries	L.S.	1.82	1.00	1.82
	Cement concrete 1:3:6 (0.30x0.20x15 = 0.009 cum)				
	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.009	3 112.70	28.01(A)
	LABOUR				
0123	Mason 1st class	Day	0.02	151.50	3.03
0124	Mason 2nd class	Day	0.2	141.60	28.32
0114	Beldar	Day	0.05	135.25	6.76
	TOTAL				160.94
	Add 1% for water charges on all except 'A'				1.33
	TOTAL				162.27
	Add 15% for contractor's profit and overheads on all except 'A'				20.14
	Cost for 1 no.				182.41
	Say				182.40

19.17 Replacement of M.S. foot rests in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size):

19.17.1 With 20x20 mm square bar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one M.S foot rests				
	MATERIALS				
1006	M.S. 20 mm square bar 0.75 m @ 3.137 Kg/m =0.024 q	quintal	0.024	175.00	76.20
9999	Carriage,painting, and other sundries	L.S.	1.82	1.00	1.82
	Labour for fabrication				
0103	Black smith (2nd class)	Day	0.10	141.60	14.16
0114	Beldar	Day	0.10	135.25	13.52
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.20x0.20x0.10 m = 0.004 cum				
	Rate as per item no 4.2.5 of SH : Concrete work	cum	0.004	3112.70	12.45(A)
	LABOUR for dismantling old fort rest cutting holes and fixing new M.S. foot rests				
0123	Mason 1st class	Day	0.05	151.50	7.58
0124	Blacksmith (2nd class)	Day	0.05	141.60	7.08
0114	Beldar	Day	0.10	135.25	13.52
	TOTAL				146.33
	Add 1% for water charges on all except 'A'				1.34
	TOTAL				147.67
	Add 15% for contractor's profit and overheads on all except 'A'				20.28
	Cost for 1 no.				167.95
	Say				167.95

19.17 Replacement of M.S. foot rests in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size):

19.17.2 With 20 mm diameter round bar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one MS foot rests				
	MATERIALS				
1003	M.S. roumd bars 20 mm dia 0.75 m @ 2.47 Kg/m =0.018 q	quintal	0.018	3 050.00	54.90
9999	Carriage,painting, and other sundries	L.S.	1.82	1.00	1.82
	Labour for fabrication				
0103	Black smith (2 nd class)	Day	0.10	141.60	14.16
0114	Beldar	Day	0.10	135.25	13.52
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)				
	0.20x0.20x0.10 m = 0.004 cum				
	Rate as per item no 4.2.5 of SH : Concrete	cum	0.004	3 112.70	12.45 (A)
	LABOUR for dismantling old fort rest cutting holes and fixing new M.S. foot rests				
0123	Mason 1st class	Day	0.05	151.50	7.58
0124	Blacksmith (2nd class)	Day	0.05	141.60	7.08
0114	Beldar	Day	0.10	135.25	13.52
	TOTAL				125.03
	Add 1% for water charges on all except ‘A’				1.13
	TOTAL				126.16
	Add 15% for contractor’s profit and overheads on all except ‘A’				17.06
	Cost for 1 no.				143.22
	Say				143.20

19.18 Supplying and fixing C.I. cover without frame for manholes :

19.18.1 455x610 mm rectangular C.I. cover (light duty)the weight of the cover to be not less than 23 kg.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cover				
	MATERIALS				
1355	C.I. Man-hole cover without frame	each	1.00	844.00	844.00
9999	Carriage of C.I. Manhole cover	L.S.	7.15	1.00	7.15
	LABOUR				
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				867.38
	Add 1 % for water charges				8.67
	TOTAL				876.05
	Add 15% for contractor’s profit and overheads				131.41
	Cost for 1 cover				1007.46
	Say				1007.45

19.18 Supplying and fixing C.I. cover without frame for manholes :

19.18.2 500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cover				
	MATERIALS				
1357	C.I. Man-hole cover without frame (medium duty) 500 mm internal diameter	each	1.00	2 129.00	2 129.00
9999	Carriage of C.I. cover	L.S.	13.47	1.00	13.47
	LABOUR				
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				2 158.70
	Add 1% for water charges				21.59
	TOTAL				2 180.29
	Add 15% for contractor's profit and overheads				327.04
	Cost for 1 no.				2 507.33
	Say				2 507.35

19.18 Supplying and fixing C.I. cover without frame for manholes :

19.18.3 560 mm diameter C.I, cover (heavy duty) the weight of the cover to be not less than 108 kg.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cover				
	MATERIALS				
3861	C.I. Man-hole cover without frame (heavy duty) 560 mm internal diameter	each	1.00	3 664.00	3 664.00
9999	Carriage of C. I. cover	L.S.	16.12	1.00	16.12
	LABOUR				
0114	Beldar	Day	0.12	135.25	16.23
	TOTAL				3 696.35
	Add 1% for water charges				36.96
	TOTAL				3 733.31
	Add 15% for contractor's profit and overheads				560.00
	Cost for 1 no.				4 293.31
	Say				4 293.30

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality

19.19.1 LD-2.5

19.19.1.1 Rectangular shape 600x450mm internal dimensions

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7130	Precast R.C.C manhole cover and frame 600x450 mm internal dimensions	each	1.00	628.00	628.00
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size)				
	1.00x0.85x0.15 = 0.1275 cum				
	Less cover with frame				

Code	Description	Unit	Quantity	Rate	Amount
	0.85x0.70x0.15 = (-) 0.0893 cum = 0.0382 cum Say 0.04 cum				
	Rate as per item no. 4.1.3 of SH : Concrete	cum	0.04	3 257.45	130.30 (A)
9999	Carriage of R.C.C cover with frame	L.S.	6.76	1.00	6.76
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				778.58
	Add 1% for water charges on all except 'A'				6.48
	TOTAL				785.06
	Add 15% for contractor's profit and overheads on all except 'A'				98.21
	Cost for 1 no.				883.27
	Say				883.25

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality

19.19.1 LD-2.5

19.19.1.2 Square shape 450mm internal dimensions

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7131	R.C.C manhole cover and frame 350 mm square	each	1.00	540.00	540.00
9999	Carriage of manhole cover	L.S.	6.76	1.00	6.76
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 0.725x0.725x0.15 = 0.0788 cum Less cover with frame 0.575x0.575x0.15 = (-) 0.0496 cum = 0.0292 cum Say 0.03 cum				
	Rate as per item no. 4.1.3 of SH : Concrete	cum	0.03	3 257.45	97.72 (A)
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				658.00
	Add 1% for water charges on all except 'A'				5.60
	TOTAL				663.60
	Add 15% for contractor's profit and overheads on all except 'A'				84.88
	Cost for 1 no.				748.48
	Say				748.50

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality.

19.19.1 L D- 2.5

19.19.1.3 Circular shape 450mm internal diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7132	R.C.C manhole cover and frame 450 mm dia	each	1.00	474.00	474.00
9999	Carriage of manhole cover	L.S.	6.76	1.00	6.67
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) $3.14/4x(0.775)^2x0.15 = 0.0708$ cum				

Code	Description	Unit	Quantity	Rate	Amount
	Less cover with frame 3.14/4x(0.625)^{2}x0.15 = (-) 0.0460 cum = 0.0248 cum Say 0.03 cum				
	Rate as per item no. 4.1.3 SH : Concrete	cum	0.03	3 257.45	97.72 (A)
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				592.00
	Add 1% for water charges on all except 'A'				4.94
	TOTAL				596.94
	Add 15% for contractor's profit and overheads on all except 'A'				74.88
	Cost for 1 no.				671.82
	Say				671.80

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality

19.19.2 MD- 10

19.19.2.1 Square shape 450mm x450mm finternal dimension

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7133	R.C.C manhole cover and frame : 450mmx450mm square	each	1.0	575.00	575.00
9999	Carriage of manhole cover	L.S.	6.76	1.00	6.76
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 0.95x0.95x0.15 =0.1354 cum Less cover with frame 0.80x0.80x0.15 = (-) 0.096 cum = 0.0394 cum Say 0.04 cum				
	Rate as per item no.4.1.3 of SH : Concrete	cum	0.04	3 257.45	130.30 (A)
9999	Sundries	L.S.	16.64	1.00	16.64
	TOTAL				728.70
	Add 1% for water charges on all except 'A'				5.98
	TOTAL				734.68
	Add 15% for contractor's profit and overheads on all except 'A'				90.66
	Cost for 1 no.				825.34
	Say				825.35

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality

19.19.2 MD-10

19.19.2.2 Circular shape 500mm internal diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7134	R.C.C manhole cover and frame 500mm dia	each	1.00	575.00	575.00
9999	Carriage of manhole cover	L.S.	6.76	1.00	6.76
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size)				

Code	Description	Unit	Quantity	Rate	Amount
	$3.14/4x(0.95)^2x0.15$ = 0.1064 cum				
	Less cover wjth frame				
	$3.14/4x(0.8)^2x0.15$ = (-) 0.0754 cum				
	= 0.031 cum Say 0.03 cum				
	Rate as per item no. 4.1.3 of SH : Concrete	cum	0.03	3 257.45	97.72
9999	Sundries	L.S.	16.64	1.00	16.64
	TOTAL				696.12
	Add 1% for water charges on all except 'A'				5.98
	TOTAL				702.10
	Add 15% for contractor's profit and overheads on all except 'A'				90.66
	Cost for 1 no.				792.76
	Say				792.75

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality

19.19.3 HD-20

19.19.3.1 Circular shape 560 mm internal diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7135	R.C.C manhole cover and frame 560 mm dia	each	838.00	1.00	838.00
9999	Carriage of manhole cover	L.S.	13.52	1.00	13.52
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size)				
	$3.14/4x(1.05)^2x0.15$ = 0.1299 cum				
	Less cover with frame				
	$3.14/4x(0.9)^2x0.15$ = (-) 0.0955 cum				
	= 0.0344 cum Say 0.03 cum				
	Rate as per item no. 4.1.3 of SH : Concrete	cum	0.03	3257.45	97.72 (A)
9999	Sundries	L.S.	20.28	1.00	20.28
TOTAL			969.52		
	Add 1% for water charges on all except 'A'				8.72
	TOTAL				978.24
	Add 15% for contractor's profit and overheads on all except 'A'				132.08
	Cost for 1 no.				1 110.32
	Say				1 110.30

19.19 Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality

19.19.4 EHD - 35

19.19.4.1 Circular shape 560 mm internal dia.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one no.				
	MATERIALS				
7136	R.C.C manhole cover and frame 560 mm dia	each	1.00	935.00	935.00
9999	Carriage of manhole cover	L.S.	13.52	1.00	13.52
	Cement concrete 1:2:4 (1 cement: 2 coarse				

Code	Description	Unit	Quantity	Rate	Amount
	sand : 4 grade stone aggregate 20 mm nominal size) 3.14/4x$(1.05)^2$x0.15 = 0.1299 cum Less cover with frame 3.14/4x$(0.9)^2$x0.15 = (-) 0.0955 cum = 0.0344 cum Say 0.03 cum				
	Rate as per item no 4.1.3 of SH : Concrete	cum	0.03	3 257.45	97.72 (A)
9999	Sundries	L.S.	20.28	1.00	20.28
	TOTAL				1 066.52
	Add 1% for water charges on all except 'A'				9.69
	TOTAL				1 076.21
	Add 15% for contractor's profit and overheads on all except 'A'				146.77
	Cost for 1 no.				1 222.98
	Say				1 223.00

19.20 Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5kg.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cover				
	MATERIALS				
1353	C.I. Cover for gully trap (standard pattern)	each	1.0	170.00	170.00
9999	Carriage for cover	L.S.	2.70	1.00	2.70
	LABOUR				
0114	Beldar	Day	0.03	135.25	4.06
	TOTAL				176.76
	Add 1 % for water charges				1.77
	TOTAL				178.53
	Add 15% for contractor's profit and overheads				26.78
	Cost for 1 cover				205.31
	Say				205.30

19.21 Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :

19.21.1 For pipes 100 to 230 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one connection MATERIALS Cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.30x0.30x0.23 m = 0.0207 cum Less pipe = 1/2x3.14x0.23x0.23x0.23 = 0.0096 cum = 0.0111 cum Say 0.10 cum				
	Rate as per item no. 4.1 .3 of SH : Concrete	cum	0.01	3257.45	32.57

Code	Description	Unit	Quantity	Rate	Amount
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement 2x0.35x0.35=0.25				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	0.25	112.80	28.20
	LABOUR (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)				
0123	Mason 1st class	Day	0.12	151.50	18.18 (A)
0124	Mason 2nd class	Day	0.12	141.60	16.99 (A)
0114	Beldar	Day	0.25	135.25	33.81 (A)
9999	Add for delay sundries etc.	L.S.	20.15	1.00	20.15
	TOTAL				149.90
	Add 1% for water charges on (A)				0.89 (B)
	TOTAL				150.79
	Add 15% for contractor's profit and overheads on (A+B)				13.50
	Cost for 1 connection				164.29
	Say				164.30

19.21 Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :

19.21.2 For pipes 250 to 300 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one connection MATERIALS Cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) = 0.35x0.35x0.30 m = 0.037 cum Less pipe = 1/2x3.14x0.30x0.30x0.30 = 0.021 cum = 0.016 cum Say 0.02 cum ''				
	Rate as per item no. 4.1.3 of SH : Concrete 12 mm cement plater 1:3(1 cement: 3 coarse sand) finished with a floating coat of neat cement 2x0.40x0.40 =0.32	cum	0.02	3257.45	65.15
	Rate as per item no 13.9.1 of SH : Finishing LABOUR (For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)	sqm	0.32	112.80	36.10
0123	Mason 1 st class	Day	0.12	151.50	18.18 (A)
0124	Mason 2nd class	Day	0.12	141.60	16.99 (A)
0114	Beldar	Day	0.25	135.25	33.81 (A)
9999	Add for delay sundries etc.	L.S.	20.67	1.00	20.67(B)
	TOTAL				190.90
	Add 1% for water charges on (A+B)				0.90
	TOTAL				191.80
	Add 15% for contractor's profit and overheads on (A+B+C)				13.58
	Cost for 1 connection				205.38
	Say				205.40

19.21 Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :

19.21.3 For pipes 350 to 450 mm diameter

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one connection				
	MATERIALS				
	Cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size)				
	= 0.50x0.50x0.30 m = 0.075 cum				
	Less pipe = 1/2x3.14x0.45x0.45x0.30 = 0.048 cum				
	= 0.027 cum Say 0.03 cum				
	Rate as per item no. 4.1.3 of SH : Concrete	cum	0.03	3257.45	97.72
	12 mm cement plater 1:3(1 cement: 3 coarse sand) finished with a floating coat of neat cement				
	2x0.55x0.55 =0.605 sqm Say 0.60 sqm	sqm	0.60	112.80	67.68
	Rate as per item no 13.9.1 of SH : Finishing				
	LABOUR				
	(For cutting holes average size 30x30 cm in 23 cm thick wall and making channel etc.)				
0123	Mason 1st class	Day	0.16	151.50	24.24 (A)
0124	Mason 2nd class	Day	0.16	141.60	22.66 (A)
0114	Beldar	Day	0.33	135.25	44.63 (A)
9999	Add for delay sundries etc.	L.S.	26.91	1.00	26.91 (B)
	TOTAL				283.84
	Add 1% for water charges on (A+B)				1.18 (C)
	TOTAL				285.02
	Add 15% for contractor's profit and overheads on (A+B+C)				17.94
	Cost for 1 connection				302.96
	Say				302.95

19.22 Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased alround with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centring and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall lead caulked joints between sand cast iron pipes, and fittings, stiff cement mortar 1:1 (1 cement: 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications :

19.22.1 100 mm dia. sand cast iron drop connection

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one drop connection				
	MATERIALS				
1617	100 mm diameter sand cost iron pipe = 38+30+33 =101 cm say 1 metre	each	0.55556	610.00	338.89
9999	Carriage of pipe	L.S	1.43	1.00	1.43

Code	Description	Unit	Quantity	Rate	Amount
	Cutting charges				
	Rate as per item no 18.83.2 of SH: water supply	each cut	3.00	29.80	89.40 (A)
1336	Cleaning eye with chain and lid	each	1.00	37.00	37.00
1621	Sand cast iron bend plain	each	1.00	178.00	178.00
1628	Sand cast iron tee	each	1.00	265.00	265.00
	Brick work in cement mortar 1:4(1 cement: 4 coarse sand)				
	0.20x0.20x0.23 = 0.009 cum				
	Less pipe 1/2x3.14x0.10x0.10x0.23 = 0.002 cum				
	= 0.007 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.007	2 293.40	16.05 (A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	0.40x0.45x1.05 m = 0.189 cum				
	0.40x0.25x0.40 = 0.040 cum				
	= 0.229 cum				
	Less pipe portion				
	1/2x3.14x0.10x0.10x1.50 = 0.012 cum				
	Toothing portion				
	2x0.40x0.05x0.10 m = 0.004 cum				
	= 0.016 cum				
	Net 0.229-0.016 = 0.213 cum Say 0.21 cum				
(A)	Rate as per item no 4.1.11 of SH : Concrete	cum	0.21	2 079.60	436.72 (A)
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	1x0.25x0.25 m = 0.0625-S.ay 0.06 sqm				
	Rate as per item no 13.9.1 SH : Finishing	sqm	0.06	112.80	6.77 (A)
	Providing lead caulked joints to 100 mm diameter pipe and special				
	Rate as per item no. 12.39.1 of SH : Roofing	each	4.00	126.50	506.00
9999	Providing joint to S.W. pipe with cement mortar 1:1(1 cement: 1 fine sand)	L.S.	26.91	1.00	26.91
	Form work				
	1.30x1.05 m= 1.36 sqm				
	Rate as per item no 5.9.2 of SH : RCC	sqm	1.36	180.40	245.34(A)
9999	Sundries including carriage of bends etc.	L.S.	26.91	1.00	26.91
	LABOUR				
	For cutting holes 5 cm deep in alternate course of brick work benching and channel				
0123	Mason 1st class	Day	0.70	151.50	106.05
0124	Mason 2nd class	Day	0.70	141.60	99.12
0114	Beldar	Day	2.70	135.25	365.18
	TOTAL				2 744.77
	Add 1% for water charges on all exept ‘A’				14.44
	TOTAL				2 759.21
	Add 15% for contractor’s profit and overheads on all exept ‘A’				218.84
	Cost of one drop connection				2 978.05
	Say				2 978.05

19.22 Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased alround with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centring and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement: 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications :

19.22.2 150 mm dia. sand cast iron drop connection

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one drop connection				
	MATERIALS				
	150 mm diameter sand cost iron pipe =				
1618	34.5+30+37 =101.5cm say 1.00m	each	0.55556	1 205.00	669.44
9999	Carriage of pipe	L.S.	1.82	1.00	1.82
	Cutting charges				
	Rate as per item no 18.83.4 of SH water supply	each cut	3.00	56.15	168.45(A)
1337	Cleaning eye with chain and lid	each	1.00	41.00	41.00
1622	Sand cast iron bend plain	each	1.00	407.00	407.00
7087	Sand cast iron tee	each	1.00	460.00	460.00
	Brick work in cement mortar 1:4(1 cement: 4 coarse sand)				
	0.20x0.20x0.23 = 0.009 cum				
	Less pipe 1/2x3.14x0.15x0.15x0.23 = 0.004 cum				
	= 0.005 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.005	2 293.40	11.47 (A)
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	0.45x0.50x1.15 m = 0.259 cum				
	0.45x0.25x0.45 = 0.0510 cum				
	= 0.310 cum				
	Less pipe portion				
	1/4x3.14x0.15x0.15x1.50 = 0.027 cum				
	Toothing portion				
	3x0.45x0.05x0.10 m = 0.004 cum				
	= 0.031 cum				
	Net 0.310-0.031 = 0.279 cum Say 0.28 cum				
	Rate as per item no 4.1.11 of SH : Concrete	cum	0.28	2 079.60	582.29
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	1x0.25x0.25m = 0.0625 Say 0.06 sqm				
	Rate as per item no13.9.1 of SH : Finishing	sqm	0.06	112.80	6.77 (A)
	Providing lead caulked joints to 150 mm diameter pipe and special				
	Rate as per item no. 12.39.2 of SH : Roofing	each	4.00	175.30	701.20 (A)
9999	Providing joint to S.W. pipe with cement mortar 1:1 (1 cement: 1 fine sand)	L.S.	39.91	1.00	39.91
	Form work				
	1.450x1.15 m= 1.67 sqm				

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no 5.9.2 of SH : RCC	sqm	1.67	180.40	301.27 (A)
9999	Sundries including carriage of bends etc.	L.S.	34.06	1.00	34.06
	LABOUR				
	For cutting holes 45 holes 5 cm deep toothing in alternate course of brick work benching and making channel				
0123	Mason 1st class	Day	0.85	151.50	128.78
0124	Mason 2nd class	Day	0.85	141.60	120.36
0114	Beldar	Day	3.50	135.25	473.38
	TOTAL				4 147.20
	Add 1% for water charges on all exept 'A'				23.76
	TOTAL				4 170.96
	Add 15% for contractor's profit and overheads on all exept 'A'				359.93
	Cost of one drop connection				4 530.89
	Say				4 530.90

19.23 Extra for depths beyond 60 cm of sand cast iron drop connection complete :

19.23.1 For 100 mm dia. sand cast iron drop connection

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	MATERIALS				
1617	100 mm diameter sand cost iron pipe 1 meter	each	0.55556	610.00	338.89
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	0.40x0.45x1.00 mm = 0.18 cum .				
	Less pipe portion				
	1/2x3.14x0.10x0.10x1.00 = 0.008 cum				
	Toothing portion				
	5x0.40x0.05x0.10 m = 0.010 cum				
	= 0.018 cum				
	Net 0.18-0.018 = 0.162 cum Say 0.16 cum				
	Rate as per item no 4.1.11 of SH : Concrete	cum	0.16	2 079.60	332.74 (A)
	Form work				
	1.30x1.00 m= 1.30 sqm				
	Rate as per item no 5.9.2 of SH : RCC	sqm	1.30	180.40	234.52 (A)
9999	Sundries	L.S.	7.15	1.00	7.15
	LABOUR				
	For cutting holes 5 cm deep in alternate course of brick work				
0123	Mason Istclass	Day	0.04	151.50	6.06
0124	Mason 2nd class	Day	0.04	141.60	5.66
0114	Beldar	Day	0.04	135.25	5.41
	TOTAL				943.82
	Add 1% for water charges on all exept 'A'				3.77
	TOTAL				947.59
	Add 15% for contractor's profit and overheads on all exept 'A'				57.05
	Cost of one drop connection				1 004.64
	Say				1 004.65

19.23 Extra for depths beyond 60 cm of sand cast iron drop connection complete :

19.23.2 For 150 mm dia. sand cast iron drop connection

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	MATERIALS				
1618	150 mm diameter sand cost iron pipe 1 meter	each	0.55556	1 205.00	669.44
9999	Carriage of materials and fixing charges	L.S.	13.39	1.00	13.39
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	0.45x0.50x1.00 mm = 0.225 cum				
	Less pipe portion				
	1/2x3.14x0.15x0.15x1.00 = 0.018 cum				
	Toothing portion				
	5x0.45x0.05x0.10 m = 0.011 cum				
	= 0.029 cum				
	Net 0.225-0.029 = 0.196 cum Say 0.20 cum				
	Rate as per item no 4.1.11 of SH : Concrete	cum	0.20	2 079.60	415.92 (A)
	Form work				
	1.45x1.00 m= 1.45 sqm				
	Rate as per item no 5.9.2 of SH : RCC	sqm	1.45	180.40	261.58 (A)
9999	Sundries	L.S.	8.09	1.00	8.09
	LABOUR				
	For cutting 5 cm deep in alternate course of brick work				
0123	Mason 1st class	Day	0.05	151.50	7.58
0124	Mason 2nd class	Day	0.05	141.60	7.08
0114	Beldar	Day	0.05	135.25	6.76
	TOTAL				1 389.84
	Add 1% for water charges on all exept 'A'				7.12
	TOTAL				1 396.96
	Add 15% for contractor's profit and overheads on all exept 'A'				107.92
	Cost of one drop connection				1 504.88
	Say				1 504.90

19.24 Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :

19.24.1 Rectangular manhole 90x80 cm and 45 cm deep

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of a manhole 90x80 and 45 cm deep				
	Dismantling of cement concrete 1:4:8 (1 cement: 4 coarse sand 8 : aggregate stone 40 mm nominal size)				
	1.51x1.41x0.20 m = 0.426 cum Say 0.43 cum				
	Rate as per item no. 15.2.2	cum	0.43	226.90	97.57
	Dismantling of second class brick work in Cement mortar 1:4 (1cement : 4 coarse sand)				
	4.32x0.23x0.35 m =0.348 cum				
	Less for pipe $2x3.14x(0.15m)^2$ x0.23m = (-) 0.008 cum				
	= 0.340 cum				
	Rate as per item no. 15.7.4 of SH -.dismantling and dimolishing	cum	0.34	310.75	105.66

Code	Description	Unit	Quantity	Rate	Amount
	Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching 2x0.90x(0.80/2) x (0.30+0.20)/2 = 0.18 cum Less for pipe 1x0.90x3.14/4x(0.15m)^2 = (-) 0.02 cum = 0.16 cum				
	Rate as per item no. 15.2.1 of SH: Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) For slab : 1.36x1.26x0.15m = 0.257 cum Less for cover 0.61x0.455x0.15m = (-) 0.042 cum = 0.215 cum Say 0.22 cum	cum	0.16	368.45	58.95
	Rate as per item no 15.3 of SH : Demolishing and dismantling	cum	0.22	537.55	118.26
9999	Removal of C.I. Cover with frame	L.S.	7.15	1.00	7.15 (A)
	TOTAL				387.59
	Add 1% for water charges on (A)				0.07(B)
	TOTAL				387.66
	Add 15% for contractor's profit and overheads on (A+B)				1.08
	Cost of one no				388.74
	Say				388.75

19.24 Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :

19.24.2 Rectangular manhole 120x90 cm and 90 cm deep

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of a manhole 120x90 and 90 cm deep Dismantling of cement concrete 1:4:8 (1 cement: 4 coarse sand 8 : aggregate stone 40 mm nominal size) 1.81x1.51x0 20 m = 0.547 cum Say 0.55 cum				
	Rate as per item no. 15.2.2 Dismantling of second class brick work in cement mortar 1 :4 (1 cement : 4 coarse sand) 5.12x0.23x0.30m = 0.942 cum Less for pipe 2x3.14x(0.15m)^{2}x0.23 m = (-) 0.008 cum = 0.934 cum Say 0.93 cum	cum	0.55	226.90	124.80
	Rate as per item no. 15.7.4 of SH :dismantling and dimolishing Dismantling cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 2x1.20x0.90x(0.80/2) x (0.30+0.20)/2 = 2.70 cum Less for pipe 1.20x3.14/4x(0.15m)^2 = (-) 0.021 cum = 0.249 cum say 0.25	cum	0.93	310.75	289.00

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no. 15.2.1 of SH : Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) For slab : 1.66x 1.36x0.15m = 0.339 cum Less for cover 0.7854x(0.50^2(0.15m) = (-) 0.029 cum = 0.31 cum	cum	0.25	368.45	92.11
	Rate as per item no 15.3 of SH : Demolishing and dismantling	cum	0.31	537.55	166.64
9999	Removal of C.I. Cover with frame	L.S.	7.15	1.00	7.15 (A)
	TOTAL				679.70
	Add 1% for water charges on (A)				0.07(B)
	TOTAL				679.77
	Add 15% for contractor's profit and overheads on (A+B)				1.08
	Cost of one no				680.85
	Say				680.85

19.24 Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :

19.24.3 Rectangular arch type manhole 140x90cm and 2.45m deep.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of a manhole 140x90 and 2.45 m deep Dismantling of cement concrete 1:4:8 (1 cement: 4 coarse sand 8 : aggregate stone 40 mm nominal size) 2.16m x1.66m x 0.20m = 0.72 cum Rate as per item no. 15.2.2 Dismantling of second class brick work in cement mortar 1:4 (1 cement: 4 coarse sand) Brick work in item 5.52mx0.23mx1.20m = 1.524 cum 3.92mx0.23mx1.15m= 1.037 cum = 2.561 cum Deduct arch ring and portion of pipe 2x½x3.14x0.25mx0.23x0.1m = 0.018 cum 2x3.14/4(0.15)²xO.23m = 0.008 cum = (-) 0.026 cum Net 2.561 - 0.026 = 2.535 cum Say 2.54 cum Brick work in arch ½x3.14x1.13x0.80x0.23m = 0.327 cum 2x½x3.14x0.25mx0.23x0.1m = 0.018 cum = 0.345 cum Say 0.35 cum Net = 2.54+0.35 = 2.89 cum	cum	0.72	226.90	163.37
	Rate as per item no. 15.7.4 of SH dismantling and dimolishing Dismantling cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 2x1.4x0.90/2x(0.20+0.30)/2 = 0.315 cum Less pipe 1.4x3.14/4x$(0.15)^2$= (-) 0.025 cum = 0.290 cum	cum	2.89	310.75	898.07

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no. 15.2.1 of SH : Dismantling and demolishing Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 grade stone aggregate 20 mm nominal size) 1.36mx1.06mx0.15 = 0.216 cum Less cover 3.14x(0.25)^{2}x0.15 = (-) 0.029 cum = 0.187 cum Say 0.19 cum	cum	0.29	368.45	106.85
	Rate as per item no 15.3 of SH : Demolishing and dismantling	cum	0.19	537.55	102.13
9999	Removal of C.I. Cover with frame	L.S.	7.15	1.00	7.15 (A)
9999	Removal of M.S foot rest	L.S.	8.06	1.00	8.06 (A)
	TOTAL				1 286.63
	Add 1% for water charges on (A)				0.15(B)
	TOTAL				1 285.78
	Add 15% for contractor's profit and overheads on (A+B)				2.30
	Cost of one no				1 288.08
	Say				1 288.10

19.24 Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :

19.24.4 Circular manhole 122 cm diameter and 1.68 m deep.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of a manhole 1.22 in internal diameter 1.68m deep Dismantling of cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 aggregate stone 40 mm nominal size) 1.98mx1.98mx0.30m=1.178cum say 1.18cum				
	Rate as per item no. 15.2.1	cum	1.18	368.45	434.77
	Dismantling of second class brick work in cement mortar 1:4 (1 cement: 4 coarse sand) Curved on plan 3.14x1.45x0.24x0.23= 0.251 3.14x(1.45+0.79)/2x1.32x0.23 = 1.069 = 1.320 Deduct arch ring and portion of pipe 2x½x3.14x0.25mx0.23x0.10m = 0.018 cum 2x3.14/4(0.15)^{2}x0.23m = 0.008 cum = 0.026 cum Net quantity 1.320 - 0.026 = 1.294 Say 1.29 cum Brick work in arches 2x½x3.14x0.25mx0.230x0.10m = 0.018 cum say 0.02 cum Total = 1.294+0.02 = 1.314 cum say 1.131 cum				
	Rate as per item no. 15.7.4 of SH dismantling and dimolishing	cum	1.31	310.75	407.08
	Dismantling cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) For benching 3.14/4x(1.22)^{2}x0.20 = 0.234 cum [(2x8.133)/360]x(4/3)x3.14x(0.61)^3 = 0.043 cum				

Code	Description	Unit	Quantity	Rate	Amount
	= 0.277 cum Less pipe:1.22x3.14/4x(0.15)^2(-)=0.0216cum = 0.2554 cum say 0.26 cum In cover fixing 0.7854x1.020x1.020x0.15m = 0.123 cum Less cover 3.14/4x(0.28)^{2}x0.15m : (-) = 0.037 cum = 0.086 cum say 0.09 cum Total = 0.26 + 0.09 = 0.35 cum				
	Rate as per item no. 15.2.1 of SH : Dismantling and demolishing	cum	0.35	368.45	128.96
9999	Removal of S.F.R.C Cover with frame size 560 mm diameter (medium duty)	L.S.	7.15	1.00	7.15 (A)
9999	Removal of M.S foot rests	L.S.	8.06	1.00	8.06 (A)
	TOTAL				986.02
	Add 1% for water charges on (A)				0.15(B)
	TOTAL				986.17
	Add 15% for contractor's profit and overheads on (A+B)				2.30
	Cost of one no				988.47
	Say				988.45

19.25 Extra for depth of manholes dismantled:

19.25.1 Rectangular manhole 90x80 cm and 45 cm deep

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre Dismantling of second class brick work in cement mortar 1:5 (1 Cement: 5 fine sand) 4.32x0.23x1.0m = 0.994 cum Say 0.99 cum				
	Rate as per item no. 15.7.4 SH:- Dismantling	cum	0.99	310.75	307.64
9999	Removing of M.S. foot rests	L.S.	1.82	1.00	1.82 (A)
	TOTAL				309.46
	Add 1% water charges on (A)				0.02 (B)
	Add 15% for contractor's profit & overheads on A+B				0.28
	Cost for one metre				309.76
	Say				309.75

19.25 Extra for depth of manholes dismantled:

19.25.2 Rectangular manhole 120x90 cm and 90 cm deep

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre Dismantling of second class brick work in cement mortar 1:5 (1 Cement: 5 fine sand) 5.12x0.23x1.0m = 1.178 cum Say 1.18 cum				
	Rate as per item no. 15.7.4 SH:- Dismantling	cum	1.18	310.75	366.69
9999	Removing of M.S. foot rests	L.S.	1.82	1.00	1.82 (A)
	TOTAL				368.51
	Add 1% water charges on (A)				0.02 (B)
	Add 15% for contractor's profit & overheads on A+B				0.28
	Cost for one metre				368.80
	Say				368.80

19.25 : Extra for depth of manholes dismantled:

19.25.3: Rectangular arch type manhole 140x90 cm and 2.45m deep (upto 4.25 m depth).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of dismantling one manhole 4.25m deep Dismantling IInd class brick work in cement mortar 1:4(1 Cement: 4 Coarse sand) for 2.45 depth Qty for 2.45m depth 5.52x0.23x1.20=1.524cum 3.92mx0.23mxI.l5m= 1.037 cum Total= 2.561 cum Deduct arch ring and portion of pipe $2x^1/_2x3.14x0.25mx0.23x0.1$ m = 0.018 cum $2x3.14/4(0.15)^2$1x0.23m = 0.008 cum Total deduction= (-) 0.026 cum Net 2.561 - 0.026 = 2.535 cum Say 2.54 cum Qty in arch $^1/_2x3.14xI.l3x0.80x0.23m$ = 0.327 cum $2x'/_2x3.14xO.25mx0.23x0.1m$ = 0.018 cum Total= 0.345 cum Say 0.35 cum Total for 2.45 m depth 2.54 + 0.35 = 2.89 cum Qty for 4.25m depth 5.52mx0.23mx1.20m= 1.524 cum 3.92mx0.23mx2.95m = 2.660 cum Total= 4.184 cum Deduct arch ring and portion of pipe $2x^1/2x3.14x0.70mx0.23x0.1m$ = 0.051 cum $2x3.14/4x(0.60)^2$ X 0.230 = 0.130 cum Total deduction= (-) 0.181 cum Net 4.184 - 0.181 = 4.003 cum Say 4.00 cum Qty in arch $'/_2x3.14xI.l3x0.80x0.23m$ = 0.327 cum $2x^1/2x3.14x0.70mx0.23x0.1m$ = 0.051 cum Total= 0.378 cum Say 0.38 cum Total for 4.25 m depth =4.38 cum Net difference = 4.38 - 2.89 = 1.49 cum Rate as per item no. 15.7.4 of SH dismantling and demolishing	cum	1.49	310.75	463.02
	Dismantling cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40mm nominal size) (Qty for 4.25m depth 2x1.4x(0.90/2)x(0.65+0.75)/2 = 0.882 cum Less pipe :$1.4x3.14/4x(0.60^2$ = (-) 0.396 cum = 0.486 cum Say 0.49 cum Qty for 2.45m depth 2x1.4x(0.90/2)x(0.20+0.30)/2 = 0.315 cum Less pipe : $1.4x3.14/4x(0.15)^2$ =(-) 0.025 cum = 0.290 cum Say 0.29 cum Net difference = 0.49 - 0.29 = 0.20 cum Rate as per item no 15.2.1 of SH : Demolishing and dismantling	cum	0.20	368.45	73.69
	Cost for 1.8 metre depth				536.71
	Cost for 1 metre depth				298.17
	Say				298.15

19.25 : Extra for depth of manholes dismantled:

19.25.4: Circular manhole 122 cm diameter and 1.68 m deep (upto 2.29 m depth)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of dismantling one manhole 2.29m deep				
	Dismantling cement concrete 1:3:6(1 Cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size)				
	1.98x1.98x0.30 = 1.178 cum. Say 1.18 cum				
	Rate as per item no. 15.2.1 S.H. dismantling	cum	1.18	368.45	434.77
	Dismantling IInd class brick work in cement mortar 1:4 (1 Cement: 4 Coarse sand)				
	Curved on plan				
	3.14x1.45x0.85x0.23=0.891				
	3.14x(1.45+0.79)/2x 1.32x0.23 = 1.069				
	= 1.96				
	Duduct arch ring and portion of pipe				
	2x1/2x3.14x0.25mx0.230x0.10 m = 0.018 cum				
	$2x3.14/4x(0.15)^2X0.230$ = 0.008 cum				
	Total deduction = 0.026 cum ,				
	Net quantity 1.96-0.026 = 1.934 Say 1.93 cum				
	Qty in arch				
	2x1/2x3.14x0.25 m x0.230x0.10 m = 0.018 cum Say 0.02 cum				
	Total =1.93+ 0.02= 1.97 cum				
	Rate as per item no. 15.2.1 of SH : Dismantling and demolishing	cum	1.97	368.45	725.85
	Dismantling cemnet concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominl size)For benching:				
	$3.14/4x(1.22)^2x0.20$ = 0.234 cum				
	$[(2x8.133)/360]x(4/3)x3.14x(0.61)^3$ =0.043 cum				
	= 0.277 cum				
	Less pipe : $1.22x3.14/4x(0.15)^2$(-) = 0.0216 cum				
	Net qty= 0.2554 cum Say 0.26 cum				
	For fixing cover : 3.14/4 xd^2 xthickness				
	0.7854x1.020x1.020x0.15 m =0.123 cum				
	Less cover $3.14/4x(0.28)^2$x 0.15 m : (-) = 0.037 cum				
	Net qty = 0.086 cum Say 0.09 cum				
	Total = 0.26 + 0.09 = 0.35 cum				
	Rate as per item no 15.2.1 of SH : Dismantling	cum	0.35	368.45	128.96
9999	Removal of SFRC cover	L.S.	7.15	1.00	7.15(A)
9999	Removal of M.S. foot rests	L.S.	8.09	1.00	8.09(A)
	TOTAL				1304.82
	Add 1 % for water charges on (A)				0.15(B)
	TOTAL				1304.97
	Add 15% for contractor's profit and overheads on (A+B)				2.31
	Cost of dismantling manhole 2.29m deep				1307.28
	Deduct cost of dismantling manhole 1.68m deep				
	Rate as per item no 19.24.4 of SH : Drainage	each	1	988.45	-988.45
	Cost of manhole 0.61m depth				318.83
	Cost per metre depth				522.67
	Say				522.65

19.26: Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately):

19.26.1 : Rectangular manhole 90x80 cm with rectangular cover 600x450 mm of grade LD - 2.5

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one manhole				
	Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate stone 20 mm nominal size) = 1.36x1.26x0.15 = 0.257 cum				
	Less cover with frame portion 0.85x0.70x0.15 =(-)0.089cum				
	Net qty = 0.168 cum say 0.17 cum				
	Rate as per item no. 15.3 of SH : Dismantling and demolishing	cum	0.17	537.55	91.38(A)
9999	Removal of R.C.C cover and frame	L.S.	7.15	1.00	7.15
	R.C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size				
	For raised slab - 1.36x1.26x0.15 = 0.257 cum				
	Less portion cover with frame = 0.85x0.70x0.15 =(-) 0.089 cum				
	Net qty= 0.168 cum Say 0.17 cum				
	Rate as per item no. 5.3 of SH : RCC work	cum	0.17	3673.85	624.55(A)
	Form work = 0.90x0.80 = 0.72 sqm				
	Less covej: =0.60x0.45 =(-) 0.27 sqm				
	Net qty= 0.045 sqm				
	Rate as per item no 5.9.3 of SH : RCC work	sqm	0.45	187.35	84.31(A)
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				820.91
	Add 1 % for water charges exept on 'A'				0.21
	TOTAL				821.12
	Add 15% for contractor's profit and overheads except on 'A'				3.13
	Cost of one no				824.25
	Say				824.25

19.26 : Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately):

19.26.2: Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD - 10

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one manhole				
	Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate stone 20 mm nominal size) 1.66x1.16x0.15 =0.339				
	Less for RCC cover with frame 3.14/44x(0.80)2x0.15=(-)0.075 cum				
	Net qty 0.264 cum Say 0.26 cum				
	Rate as per item no. 15.3 of SH : Dismantling and demolishing	cum	0.26	537.55	139.76(A)
9999	Removal of R.C.C cover and frame	L.S.	7.15	1.00	7.15
	R.C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size				
	1.66x1.36x0.15 = 0.339 cum				
	Less portion cover with frame = 314/4x0.80x0.80x0.15 =(-) 0.075 cum				
	Net qty= 0.264 cum Say 0.26 cum				

Code	Description	Unit	Quantity	Rate	Amount
	Rate as per item no 5.3 of SH : RCC Work Form work = 1.2x0.90 = 1.08 sqm Less cover = 3.14/4x(0.50)^2=(-) 0.196 sqm Net qty = 0.884 sqm Say 0.88 sqm	cum	0.26	3 673.85	955.20(A)
	Rate as per item no 5.9.3 of SH : RCC work	sqm	0.88	187.35	164.87
9999	Sundries	L.S.	16.64	1.00	16.64
	TOTAL				1283.62
	Add 1% for water charges exept on 'A'				0.24
	TOTAL				1238.86
	Add 15% for contractor's profit and overheads except on 'A'				3.60
	Cost of one no				1287.46
	Say				1287.45

19.26 : Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately):

19.26.3 : Rectangular manhole 120x90 cm with circular cover 560 mm dia of grade HD - 20

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one manhole Dismantling of R.C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate stone 20 mm nominal size) 1.66x1.36x0.15 = 0.339 cum Less for RCC cover with frame 3.14/4x(0.90jfcx0.15 =(-) 0.095 cum Net qty 0.244 cum Say 0.24 cum				
	Rate as per item no 15.3 of SH : Dismantling	cum	0.24	537.55	129.01(A)
9999	Removal of R.C.C cover and frame	L.S.	7.15	1.00	7.15(B)
	R.C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.66x1.36x0.15 = 0.339 cum - Less portion cover with frame = 3.14/4x0.90x0.90x0.15 =(-) 0.095 cum Net qty = 0.244 cum Say 0.24 cum				
	Rate as per item no 5.3 of SH : RCC Work Form work = 1.2x0.90 = 1.08 sqm Less cover = 3.14/4x(0.56)^2 =(-) 0.246 sqm' Net qty = 0.834 sqm Say 0.83 sqm	cum	0.24	3 673.85	881.72(A)
	Rate as per item no 5.9.3 of SH : RCC work	sqm	0.83	187.35	155.50(A)
9999	Sundries	L.S.	20.28	1.00	20.28
	TOTAL				1 193.66
	Add 1 % for water charges except on 'A'				0.27
	TOTAL				1 193.93
	Add 15% for contractor's profit and overheads except on 'A'				4.16
	Cost of one no.				1 198.09
	Say				1 198.10

19.26 : Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately):

19.26.4: Circular manhole 140 cm dia with circular cover 600 mm dia of grade EHD - 35

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one manhole				
	Dismantling of C.C slab of 1:2:4 (1 cement: 2 coarse sand : 4 aggregate-stone 20 mm nominal size)				
	= $3.14/4x(0.985)^2x0.15$ = 0.114 cum				
	Less cover $3.14/4x(0.90)^2$ x0.15 = (-) 0.095 cum				
	Net qty = 0.019 cum Say 0.02 cum				
	Rate as per item no. 15.3 of SH : Dismantling and demolishing	cum	0.02	537.55	10.75(A)
9999	Removal of R.C.C cover and frame	L.S.	8.06	1.00	8.06
	C.C work 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	$3.14/4x(.985)^2x0.15$ = 0.114cum				
	Less portion cover with frame				
	= 3.14/4x0.90x0.90x0.15 =(-) 0.095 cum				
	= 0.019 cum Say 0.02 cum				
	Rate as per item no.4 2.3 of SH : Concrete work	cum	0.02	3579.10	71.58(A)
9999	Sundries	L.S,.	20.28	1.00	20.28
	TOTAL				110.67
	Add 1 % for water charges except on 'A'				0.28
	TOTAL				110.95
	Add 15%for contractor's profit and overheads except on 'A'				4.29
	Cost of one no				115.24
	Say				115.25

19.27: Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame complete as per standard design :

19.27.1: With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	MATERIALS				
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.11x1.06x0.15=0.176 say 0.18cum				
	Rate as per item no4.1.11of SH :Concrete work	cum	0.18	2 079.60	374.33
	Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	2.82 m x 0.23m x0.45 m = 0.29 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.29	2 293.40	665.09
	12 mm cement plaster 1:3(1 cement: 3 coarse sand) finished with floating coat of neat cement				
	Wall: 1.90x0.45 m = 0.855 sqm				
	Bed : 0.45x0.50 m = 0.225 sqm -				
	Total= 1.080 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	1.08	112.80	121.82
	Cement concrete 1:2:4 (1 cement: 2 coarse				

Code	Description	Unit	Quantity	Rate	Amount
	sand : 4 graded stone aggregate 20 mm nominal size) 2.82x0.23x0.15 m = 0.097 cum Say 0.10 cum Rate as per item no.4.2.3 of SH:Concrete work	cum	0.10	3 579.10	357.91
	Form work 3.50x0.15 m = 0.525 sqm Say 0.53 sqm Rate as per item no 5.9.2 of SH : RCC work	sqm	0.53	180.40	95.61
7380	Precast R.C.C.gully grating with frame 500x450 mm	each	1.00	533.00	533.00(A)
9999	Carriage of R.C.C. grating	L.S.	7.15	1.00	7.15(A)
9999	Fixing R.C.C. grating	L.S.	5.33	1.00	5.33(A)
	TOTAL				2 160.24
	Add 1% for water charges on (A)				5.45(B)
	TOTAL				2 165.69
	Add 15% for contractor's profit and overheads on (A+B)				82.64
	Cost of one chamber				2 248.33
	Say				2 248.35

19.28: Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks of class designation 75 in cement w mortar 1:4(1 cement: 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :

19.28.1: With F.P.S. Bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.06mxl.1.06mx0.15 m= 0.17 cum Say .17 cum Rate as per item no. 4.1.11SH: Concrete work	cum	0.17	2 079.60	353.53
	Brick work in bricks of class designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 2.72 m x 0.23m x0.70 m = 0.438 cum Deduct opening 0.45x0.23x0.10 m = 0.01 cum Block $3x(0.075)^3$= 0.001 cum Total deduction= 0.011 cum Net qty. = 0.438 (-) 0.011 = 0.427 cum Say 0.43 cum Rate as per item no 6.1.1 of SH : Brick Work	cum	0.43	2 293.40	986.16
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 1.80x0.70 m= 1.26 sqm Bed : 0.45x0.45 m = 0.202 sqm Top : 0.45x0.20 m = 0.09 sqm Sides: 2x0.20x0.10 m = 0.04 sqm Total= 1.592 sqm - Deduct opening 0.45x0.10 m = 0.045 sqm Net qty. = 1.592 (-) 0.045 = 1.547 cum Say 1.55 cum Rate as per item no 13.9.1-of SH : Finishing	sqm	1.55	112.80	174.84
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				

Code	Description	Unit	Quantity	Rate	Amount
	Block = 3x$(0.75)^3$= 0.001 cum				
	Rate as per item no.4.2.3 of SH:Concrete work R.C.C. 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size). 0.91x0.91x0.075 m = 0.062 cum Say 0.06 cum	cum	0.001	3 579.10	3.58
	Rate as per item no. 5.3 of SH : RCC work Form work 0.45x0.45 m = 0.202 sqm 0.45x0.20 m = 0.09 sqm outside slab : 3.40x0.075 m = 0.255 sqm Total= 0.547 sqm Say 0.55 sqm	cum	0.06	3 673.85	220.43
	Rate as per item no 5.9.2 of SH : RCC work Mild steel reinforcement for R.C.C work 0.062 cum @ 80 kg/cum = 4.96 kg	sqm	0.55	180.40	99.22
	Rate as per item no. 5.22.1 of SH : RCC work	kg	4.96	41.50	205.84
7381	Vertical R.C.C.grating 450x100 mm	each	1.00	250.00	250.00(A)
9999	Fixing and carriage of R.C.C. grating	L.S.	20.67	1.00	20.67(A)
	TOTAL				2 314.27
	Add 1 % for water charges on (A)				2.71(B)
	TOTAL				2 316.98
	Add 15% for contractor's profit and overheads on (A+B)				41.01
	Cost of one chamber				2 357.99
	Say				2 358.00

19.29: Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :

19.29.1: With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.71mx1.71mx0.15m = 0.285 cum Say 0.29 cum				
	Rate as per item no. 4.1.11	cum	0.29	2 079.60	603.08
	Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 1.91 m x 0.23m x0.45 m = 0.199 cum 2.20mx0.23mx0.70 m = 0.354 cum Total= 0.553 cum ' Deduct lintel portion 2x0.23x0.20x0.20 m = (-) 0.018 cum Net qty= 0.0535 cum Say 0.54 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.54	2 293.40	1 238.44
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 1.80x0.70 m = 1.26 sqm				

Code	Description	Unit	Quantity	Rate	Amount
	Wall: 1.40x0.45 m = 0.63 sqm Bed: 1.10x0.50 m = 0.55 sqm Total= 2.44 sqm Deduct 2x0.20x0.20 m = (-) 0.08 sqm Net qty= 2.36 sqm				
	Rate as per item no 13.9.1 of SH : Finishing Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	sqm	2.36	112.80	266.21
	Block = 1.92x0.23x0.15 = 0.07 cum				
	Rate as per item no. 4.2.3 of SH:Concrete work R.C.C. 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	0.07	3 579.10	250.54
	0.88x0.96x0.075 m = 0.063 cum Say 0.06 cum				
	Rate as per item no. 5.3 of SH : RCC work R.C.C. 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in lintels	cum	0.06	3 673.85	220.43
	1x0.96x0.20x0.20 m = 0.04 cum				
	Rate as per item no. 5.13 of SH : RCC work Form work	cum	0.04	6 002.80	240.11
	Slab bottom 0.50x0.65 m = 0.325 sqm Outer periphery 3.50x0.075 m = 0.263 sqm 2.20x0.15 m = 0.330 sqm Total= 0.918 sqm Say 0.91 sqm				
	Rate as per item no 5.9.2 of SH : RCC work Mild steel reinforcement for R.C.C work (0.06+0.04) = 0.10 cum @ 80 kg/cum = 8.00 kg	sqm	0.91	180.40	164.16
	Rate as per item no. 5.22.1 of SH : RCC work	kg	8.00	41.50	332.00
7380	Precast R.C.C.gully grating with frame 500x450 mm	each	1.00	533.00	533.00(A)
9999	Carriage of R.C.C. grating	L.S.	7.15	1.00	7.15(A)
7381	Precast R.C.C.grating 450x100 mm vertical	each	1.00	250.00	250.00(A)
9999	Labour for fixing pre cast R.C.C. grating and frame	L.S.	34.06	1.00	34.06
	TOTAL				4 139.18
	Add 1% for water charges on (A)				8.24(B)
	TOTAL				4 147.42
	Add 15% for contractor’s profit and overheads on (A+B)				124.87
	Cost of one chamber				4 272.29
	Say				4 272.30

19.30 Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :

19.30.1: Inside dimensions 455x610 mm and 45 cm deep for single pipe line :

19.30.1.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one chamber				
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	1.22mx1.065mx0.15m=0.195 cum Say 0.20 cum				
	Rate as per item no 4.1.11 SH: conerete work	cum	0.20	2 079.60	415.92
	Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	3.05 m x 0.23m x0.30 m = 0.210 cum				
	Less pipe				
	$2x3.14/4x(0.10)^2x0.23$ m = (-) 0.004 cum				
	Net qty= 0.206 cum Say 0.21 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.21	2 293.40	481.61
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	Wall: 2.13x0.30 m = 0.639 sqm				
	Bed : 0.61x0.455 m = 0.278 sqm				
	Total= 0.917 sqm				
	Less pipe $2x3.14/4x(0.10)^2$= (-) 0.016 sqm				
	Net qty = 0.901 sqm Say 0.90 sqm				
	Rate as per item13.9.1 of SH : Finishing	sqm	0.90	112.80	101.52
	Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	3.05x0.23x0.15 = 0.105 cum say 0.11 cum				
	Rate as per item no.4.2.3 of SH:Concrete work	cum	0.11	3 579.10	393.70
	Form work				
	Outer periphery 3.73x0.15 m = 0.56 sqm				
	Rate as per item no 5.9.2 of SH : RCC work	sqm	0.56	180.40	101.02
1354	C.I. Cover with frame 455x610 mm	each	1.00	1395.00	1 395.00(A)
9999	Carriage of C.I.cover and frame	L.S.	7.15	1.00	7.15(A)
9999	Painting of C.I. Cover and frame with coal tar	L.S.	7.15	1.00	7.15(A)
9999	Sundries	L.S.	13.52	1.00	13.52(A)
	TOTAL				2 916.59
	Add 1% for water charges on (A)				14.23(B)
	TOTAL				2 930.82
	Add 15% for contractor's profit and overheads on (A+B)				215.56
	Cost of one chamber				3 146.38
	Say				3 146.40

19.30 Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :

19.30.2 Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :

19.30.2.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one no.				
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size)				
	1.31mx1.11rnx0.15 m= 0.22 cum				
	Rate as per item no. 4.1.11	cum	0.22	2 079.60	457.51
	Brick work in oncks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	3.32 m x 0.23m x0.30 m = 0.229 cum				
	Less pipe				
	$3x3.14x(0.10)^2x0.23$ m = (-) 0.005 cum				
	Net qty= 0.224 cum Say 0.22 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.22	2 293.40	504.55
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	Wall: 2.40x0.30 m = 0.72 sqm				
	Bed : 0.70x0.50 m = 0.35 sqm				
	= 1.07 sqm				
	Less pipe $3x3.14/4x(0.10)^2$= (-) 0.02 sqm				
	Net qty= 1.05 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	1.05	112.80	118.44
	R.C.C 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)				
	1.16x0.96x0.15 = 0.167 cum				
	Deduct cover				
	0.61x0.45x0.15 m = (-) 0.042 cum				
	Net qty= 0.125 cum Say 0.13 cum				
	Rate as per item no. 5.3 of SH : RCC work	cum	0.13	3 673.85	477.60
	Form work				
	Inside area of chamber : 0.70x0.50 m = 0.35 sqm				
	Outer periphery 4.00x0.15 m = 0.60 sqm				
	= 0.95 sqm				
	Deduct cover : 0.61x0.455 m = (-) 0.278 sqm				
	= 0.672 sqm Say 0.67 sqm				
	Rate as per item no 5.9.2 of SH : RCC work	sqm	0.67	180.40	120.87
	M.S.reinforcement for slab				
	0.13 cum @ 48.06 kg/cum = 6.25 kg				
	Rate as per item no. 5.22.1 of SH : RCC work	kg	6.25	41.50	259.38

Code	Description	Unit	Quantity	Rate	Amount
1354	C.I. Cover with frame 455x610 mm	each	1.00	1 395.00	1 395.00(A)
9999	Carriage of C.I. Cover and frame	L.S.	7.15	1.00	7.15(A)
9999	Painting of C.I. Cover and frame with coal tar	L.S.	7.15	1.00	7.15(A)
9999	Sundries	L.S.	13.52	1.00	13.52(A)
	TOTAL				3361.17
	Add 1 % for water charges on (A)				14.23(B)
	TOTAL				3375.40
	Add 15% for contractor's profit and overheads on (A+B)				215.56
	Cost of one chamber				3 590.96
	Say				3 590.95

19.30 Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :

19.30.3 Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :

19.30.3.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one chamber				
	Cement concrete 1:5:10 (1 cement: 5 fine sand : 10 graded stone aggregate 40 mm nominal size) 1.46rnxl.21mx0.15 m= 0.26 cum				
	Rate as per item no. 4.1.11	cum	0.26	2 079.60	540.70
	Brick work in oncks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand) 3.82 m x 0.23m x0.30 m = 0.26 cum Less pipe $5x3.14/4x(0.10)^2x0.23$ m = (-) 0.009 cum Net qty= 0.251 cum Say 0.26 cum				
	Rate as per item no 6.1.1 of SH : Brick Work	cum	0.26	2 293.40	596.28
	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement Wall: 2.90x0.30 m = 0.87 sqm Bed : 0.85x0.60 m = 0.51 sqm = 1.38 sqm Less pipe $5x3.14/4x(0.10)^2$= (-) 0.04 sqm Net qty = 1.34 sqm				
	Rate as per item no 13.9.1 SH : Finishing	sqm	1.34	112.80	151.15
	R.C.C 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 1.31x1.06x0.15 = 0.208 cum Deduct cover 0.61x0.455x0.15 m = (-) 0.042 cum				

Code	Description	Unit	Quantity	Rate	Amount
	Net qty= 0.166 cum Say 0.17 cum				
	Rate as per item no. 5.3 of SH : RCC work	cum	0.17	3 673.85	624.15
	Form work				
	Inside area of chamber : 0.85x0.60 m = 0.511 sqm				
	Outer periphery 4.50x0.15 m = 0.675 sqm = Total 1.186 sqm				
	Deduct cover : 0.61x0.455 m = (-) 0.278 sqm				
	Net qty= 0.908 sqm Say 0.91 sqm				
	Rate as per item no 5.9.2 of SH : RCC work	sqm	0.91	180.40	164.16
	M.S.reinforcement for slab for 0.17 cum @ 48.06 kg/cum				
	= 48.06x0.17cum = 8.17kg				
	Rate as per item no. 5.22.1 of SH : RCC work	kg	8.17	41.50	339.06
1354	C.I. Cover with frame 455x610 mm	each	1	1 395.00	1 395.00(A)
9999	Carriage of C.I. Cover and frame	L.S.	7.15	1.00	7.15(A)
9999	Painting of C.I. Cover and frame with coal tar	L.S.	7.15	1.00	7.15(A)
9999	Sundries	L.S.	13.52	1.00	13.52(A)
	TOTAL				3 838.72
	Add 1 % for water charges on (A)				14.23(B)
	TOTAL				3 852.95
	Add 15% for contractor's profit and overheads on (A+B)				215.56
	Cost of one chamber				4 068.51
	Say				4 068.50

19.31 Extra for depth beyond 45 cm of brick masonry chamber :
19.31.1 For 455x610 mm size
19.31.1.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	3.05 x 0.23m x 1.00m = 0.70 cum				
	Rate as per item no. 6.1.1	cum	0.70	2 293.40	1 605.38
	12mm cement plaster1:3 (1 cement: 3 coarse sand finished with floating coat of neat cement				
	Wall: 2.13x1.00 m = 2.13 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	2.13	112.80	240.26
	TOTAL				1 845.64
	Cost per metre				1 845.64
	Say				1 845.65

19.31 Extra for depth beyond 45 cm of brick masonry chamber :
19.31.2 For 500x700 mm size
19.31.2.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	Brick work in bricks of clas designation 75 in cement mortar 1:4(1 cement: 4 coarse sand)				
	3.32 x 0.23m x 1.00m = 0.76 cum				
	Rate as per item no. 6.1.1	cum	0.76	2 293.40	1 742.98
	12mm cernem plaster1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement				
	Wall: 2.40x1.00 m = 2.40 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	2.40	112.80	270.72
	TOTAL				2 013.70
	Cost per metre				2 013.17
	Say				2 013.70

19.31 Extra for depth beyond 45 cm of brick masonry chamber :
19.31.3 For 600x850 mm size
19.31.3.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one metre				
	Brick work in bricks of clas designation 75 in cement mortar 1:4 (1 cement: 4 coarse sand)				
	3.82 m x 0.23m xl.00 m = 0.88 cum				
	Rate as per item no. 6.1.1	cum	0.88	2 293.40	2 018.19
	12 mm cement plaster 1:3(1 cement: 3 coarse sand finished with floating coat of neat cement				
	Wall : 2.90x1.00 m = 2.90 sqm				
	Rate as per item no 13.9.1 of SH : Finishing	sqm	2.90	112.80	327.12
	TOTAL				2 345.31
	Cost per metre				2 345.31
	Say				2 345.30

19.32 Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.
19.32.1 With F.P.S. bricks

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one soak pit				
	Earth work in excavation including disposal of surplus earth $3.14/4x(2.5)^2x3m$ = 14.73 cum				
	Rate as per item no. 2.8.1 of SH : Earth work	cum	14.73	103.40	1 523.08(A)
	= $3.14/4x(2.5)^2$ x 1.5 m = 7.37 cum				
	Rate as per item no. 2.26.1 of SH : Earth work 2nd class bricks	cum	7.37	18.90	139.29(A)
	perimetre = 4x0.35 =1.40 m				
	Area = 1.40x2.925 m = 4.1 sqm				
	Number of brick = 4.1 x487x0.066 =131.78				
	Wastage 10%= 13.718				
2602	Total= 144.96 Say 145 numbers	1000 Nos	145.00	1 900.00	275.50
	Brickbats = $3.14/4x(1.2)^2x2.925m$ =3.33 cum				
	Deduct = 0.45x0.45x2.925 m = 0.59 cum				
0362	Net qty= 2.74 cum ‘	cum	2.74	253.00	693.22

Code	Description	Unit	Quantity	Rate	Amount
	Brick aggregate 50 to 80 mm nominal size				
0285	= 3.14x1.50x0.03x2.925 m = 4.13 cum	cum	4.13	350.00	1 445.50
	Brick aggregate 40 mm nominal size				
0287	= 3.14x2.15x0.35x2.925 m =6.91 cum	cum	6.91	360.00	2 487.60
1854	100 mm diametre S.W. pipes (60 cm long)	each	3.00	30.00	90.00
	Carriage of brick bats and aggregate				
2260	(2.74+4.13+6.91) cum = 6.25 sqm	cum	13.78	57.83	796.90
2201	Carriage of bricks	1000Nos	145.00	141.88	20.57
9999	Single matting 2.5x2.5 m = 6.25 sqm	L.S.	112.14	1.00	112.14
	Precast R.C.C.slabs 7.5 cm thick in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 0.45x0.45x0.075 m = 0.02 cum				
	Rate as per item no 5.12 of SH : RCC work	cum	0.02	4880.15	97.60(B)
	Reinforcement @ 80 kg/cum = 0.02x80 =1.6 kg				
	Rate as per item no. 5.22.1 of SH : RCC work	kg	1.60	41.50	66.40(B)
	2nd class brick edging laid length wise with half brick depth. 3.14x2.6 m =8.17 m				
	Rate as per item no. 16.8.1 of SH : Road work	metre	8.17	14.90	121.73(B)
	LABOUR				
0123	Mason 1st class	Day	0.50	151.50	75.75
0124	Mason 2nd class	Day	0.50	141.60	70.80
0114	Beldar	Day	3.00	135.25	405.75
0115	Coolies	Day	3.00	135.25	405.75
	TOTAL				8827.58
	Add 1% for water charges on all except on (A+B)				68.79
	TOTAL				8896.37
	Add 15% for contractor's profit and overheads on all except on (A+B)				1042.24
	Cost of one soak pit				9 938.61
	Say				9 938.60

19.33 Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one soak pit				
	Earth work in excavation including disposal of surplus earth 1.2x1.2x1.2m = 1.73 cum				
	Rate as per item no. 2.8.1 of SH : Earth work	cum	1.73	103.40	178.88(A)
	Brick bats				
0362	1.2x12x1.2 m = 1.73 cum	cum	1.73	253.00	437.69
2260	Carriage of brickbats	cum	1.73	57.83	100.05
	Second class brick edging laid length wise with half brick depth				
	Rate as per item no. 16.8.1 of SH : Road work	meter	5.20	14.90	77.48(A)
1854	S.W. pipe 100 mm diameter (60 cm long)	each	2.00	30.00	60.00
	Single matting				
9999	1.2x1.2 m= 1.44 sqm	L.S.	25.84	1.00	25.84

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
	For filling brick bats				
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S.	13.52	1.00	13.52
	TOTAL				961.08
	Add 1% for water charges on all except on (A)				7.05
	TOTAL				968.13
	Add 15% for contractor's profit and overheads on all except on (A)				106.77
	Cost of one soak pit				1 074.90
	Say				1 074.90

19.34 Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.34.1 100 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one no.				
	MATERIALS				
7128	S.W intercepting trap 100 mm dia	each	1.0	144.00	144.00
9999	Carriage of trap	L.S.	1.04	1.00	1.04
0367	Cement for one joint	tonne	0.0013	4 500.00	5.85
2209	Carriage of cement	tonne	0.0013	47.29	0.06
0983	Fine sand	cum	0.001	320.00	0.32
2261	Carriage of fine sand	cum	0.001	53.21	0.05
1881	Spun yarn or plain gaskin	kilogram	0.09	30.00	2.70
	LABOUR				
0123	Mason 1st class	Day	0.02	151.50	3.03
0124	Mason 2nd class	Day	0.02	141.60	2.83
0114	Beldar	Day	0.06	135.25	8.12
0101	Bhisti	Day	0.02	138.45	2.77
	TOTAL				170.77
	Add 1% for water charges				1.71
	TOTAL				172.48
	Add 15% for contractor's profit and overheads				25.87
	Cost of one no.				198.35
	Say				198.35

19.34 Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete :

19.34.2 150 mm dia

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost of one no.				
	MATERIALS				
7129	S.W. iintercepting trap 150mmdia	each	1.00	202.00	202.00
9999	Carriage of trap	L.S.	2.08	1.00	2.08
0367	Cement for one joint	tonne	0.0019	4 500.00	8.55
2209	Carriage of cement	tonne	0.0019	47.29	0.09
0983	Fine sand	cum	0.0014	320.00	0.45

Code	Description	Unit	Quantity	Rate	Amount
2261	Carriage of fine sand	cum	0.0014	53.21	0.07
1881	Spun yarn or plain gaskin	kilogram	0.18	30.00	5.40
	LABOUR				
0123	Mason 1st class	Day	0.03	151.50	4.54
0124	Mason 2nd class	Day	0.03	141.60	4.25
0114	Beldar	Day	0.08	135.25	10.82
0101	Bhisti	Day	0.03	138.45	4.15
	TOTAL				242.40
	Add 1% for water charges				2.42
	TOTAL				244.82
	Add 15% for contractor's profit and overheads				36.72
	Cost of one no.				281.54
	Say				281.55

SUB HEAD : 20.0

PILE WORK

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.1 400 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x0.40^{2}x20 = 2.51 cum				
(A)	Rate as per item No. 5.33 of SH : RCC work	cum	2.51	4147.40	10409.97
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	2.51	98.20	246.48
9999	Sundries	L.S.	521.08	1.00	521.08
7181	C.I. Shoes @ 80 kg per pile	Kilogram	80.00	40.00	3200.00
7182	M.S. clamps for shoes @ 35 kg per pile	Kilogrsm	35.00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				26085.15
	Add 1 % for water charges except on (A)				154.29
	TOTAL				26239.44
	Add 15% for contractor's profit and overheads except on (A)				2337.45
	Cost for 20 metre pile				28576.89
	Cost for 1 metre pile				1428.84
	Say				1428.85

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.2 450 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x0.45^{2}x20 = 3.18 cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	3.18	4147.40	13188.73
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	3.18	98.20	312.28
9999	Sundries	L.S.	392.70	1.00	392.70
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3200.00
7182	M.S. clamps for shoes @ 35 kg per pile	kilogram	35 .00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.48	28000.00	13440.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				32161.33
	Add 1 % for water charges except on (A)				186.60
	TOTAL				32347.93
	Add 15% for contractor's profit and overheads except on (A)				2827.04
	Cost for 20 metre pile				35 174.97
	Cost for 1 metre pile				1 758.75
	Say				1 758.75

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.3 500 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4x0.50^2x20$ = 3.925 cum				
(A)	Rate as per item No 5.33 of SH : RCC work.	cum	3.925	4147.40	16278.54
(A)	Rate as per Item No 5.34.2 of S.H.: R.C.C. work.	cum	3.925	98.20	385.44
9999	Sundries	L.S.	530.00	1.00	530.00
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3200.00
7182	M.S. clamps for shoes @ 35 kg per pile	kilogram	35.00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.60	28000.00	16800.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				38821.61
	Add 1 % for water charges except on (A)				221.58
	TOTAL				39043.19
	Add 15% for contractor's profit and overheads except on (A)				3356.88
	Cost for 20 metre pile				42400.07
	Cost for 1 metre pile				2120.00
	Say				2120.00

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap) :

20.1.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.55^2 \times 20 = 4.75$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	4.75	4147.40	19700.15
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	4.75	98.20	466.45
9999	Sundries	L.S.	371.88	1.00	371.88
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3 200.00
7182	M.S. clamps for shoes @ 35 kg per pile	kilogram	35.00	35.00	1 225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.60	28000.00	16800.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				42166.10
	Add 1 % for water charges except on (A)				220.00
	TOTAL				42386.10
	Add 15% for contractor's profit and overheads except on (A)				3332.93
	Cost for 20 metre pile				45 719.02
	Cost for 1 metre pile				2 285.95
	Say				2 285.95

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.5 750 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 15 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.75^2 \times 20 = 6.62$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	6.62	4147.40	27455.79
(A)	Rate as per Item No 5.34.2 S,H.: R.C.C. work	cum	6.62	98.20	650.08
9999	Sundries	L.S.	573.57	1.00	573.57
7181	C.I. Shoes @ 80 kg per pile	Kilogram	80.00	40.00	3200.00
7182	M.S. clamps for shoes @ 35 kg per pile	Kilogram	35.00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.70	28000.00	19600.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.14	151.50	21.21
0114	Belder	Day	3.50	135.55	473.38
	TOTAL				53319.03
	Add 1 % for water charges except on (A)				252.13
	TOTAL				53571.16
	Add 15% for contractor's profit and overheads except on (A)				
	Cost for 15 metre pile				57390.95
	Cost for 1 metre pile				3826.06
	Say				3826.05

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.6 1000 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 m length of pile				
	MATERIAL				
	Concrete $3.14/4x1.00^2x10$ = 7.85 cum				
(A)	Rate as per item No. 5.33 of SH:RCC work	Cum	7.85	4147.40	32557.59
(A)	Rate as per Item No-5.34.2; S.H.: R.C.C. work	cum	7.85	98.20	770.87
9999	Sundries	L.S.	897.89	1.00	897.89
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3200.00
7182	M.S. clamps for shoes @ 35 kg per pile	kilogram	35.00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.68	28000.00	19040.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.16	151.50	24.24
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				58376.09
	Add 1 % for water charges except on (A)				250.48
	TOTAL				58626.57
	Add 15% for contractor's profit and overheads except on (A)				3794.79
	Cost for 10 metre pile				62 421.36
	Cost for 1 metre pile				6 242.14
	Say				6 242.15

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.7 1200 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 9 m length of pile				
	MATERIAL				
	Concrete $3.14/4x1.2^2x9$ =10.17cum				
(A)	Rate as ner item No 5.33 of SH : RCC work	cum	10.17	4147.40	42179.06
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	10.17	98.20	998.69
9999	Sundries	L.S.	733.37	1.00	733.37
7181	a) C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3200.00
7182	b) M.S. clamps for shoes @ 35 kg per pile	kilogram	35.00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.67	28000.00	18760.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.18	151.50	27.27
0114	Beldar	Day	4.50	135.25	608.62
	TOTAI				67852.01
	Add 1% for water charges except on (A)				246.74
	TOTAL				68098.75
	Add 15% for contractor's profit and overheads except on (A)				3738.15
	Cost for 9 metre pile				71836.90
	Cost for 1 metre pile				7981.88
	Say				7981.90

20.1 Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of specified diameter and length below the pile cap M 35 in cement concrete, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap):

20.1.8 1500 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 9 m length of pile				
	MATERIAL				
	Concrete $3.14/4x1.5^2$ x9 =15.90 cum				
(A)	Rate as per item No. 5.33 of SH:RCC work.	cum	15.9	4147.40	65943.66
(A)	Rate as per Item No 5.34.2 S.H.:R.C.C. work.	cum	15.9	98.20	1561.38
9999	Sundries	L.S.	1113.48	1.00	1113.48
7181	(a) C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3200.00
7182	(b) M.S. clamps for shoes® 35 kg per pile	kilogram	35.00	35.00	1225.00
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.77	28000.00	21560.00

Code	Description	Unit	Quantity	Rate	Amount
0025	Hire and running charges of light crane.	Day	0.10	2000.00	200.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.20	151.50	30.30
0114	Beldar	Day	5.00	135.25	676.25
	total				95510.07
	Add 1% for water charges except on (A)				280.05
	TOTAL				95790.12
	Add 15% for contractor's profit and overheads except on (A)				4242.76
	Cost for 9 metre pile				100 032.88
	Cost for 1 metre pile				11 114.76
	Say				11 114.75

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.1 300 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.30^2 \times 20 = 1.41$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	1.41	4147.40	5534.04
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	1.41	98.20	138.46
7183	Bentonite.	tonne	0.16	2700.00	432.00
9999	Sundries	L.S.	289.85	1.00	289.85
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.38	4000.00	1520.00
0018	Hire and running charges of loader.	Day	0.30	800.00	240.00
0017	Hire and running charges of tipper	Day	0.30	1030.00	309.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				19265.82
	Add 1% for water charges except on (A)				132.80
	TOTAL				19398.62
	Add 15% for contractor's profit and overheads except on (A)				2011.85
	Cost for 20 metre pile				21410.47
	Cost for 1 metre pile				1070.52
	Say				1070.50

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.40^2 \times 20 = 2.51$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	2.51	4147.40	10409.97
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	2.51	98.20	246.48
7183	Bentonite	tonne	0.225	2700.00	607.50
9999	Sundries	L.S.	79.06	1.00	79.06
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.38	4000.00	1520.00
0018	Hire and running charges of loader.	Day	0.30	800.00	240.00
0017	Hire and running charges of tipper	Day	0.30	1030.00	309.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				23900.69
	Add 1 % for water charges except on (A)				132.44
	TOTAL				24033.13
	Add 15% for contractor's profit and overheads except on (A)				2006.51
	Cost for 20 metre pile				26 039.64
	Cost for 1 metre pile				1 301.98
	Say				1 302.00

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.45^2 \times 20 = 3.18$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	3.18	4147.40	13188.73
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	3.18	98.20	312.28
7183	Bentonite	tonne	0.25	2 700.00	675.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	230.69	1.00	230.69
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.47	28000.00	13160.00
0025	Hire and running charges of light crane.	Day	0.63	2 000.00	1260.00
0026	Hire and running charges of bentonite pump.	Day	0.38	4 000.00	1520.00
0018	Hire and running charges of loader.	Day	0.30	800.00	240.00
0017	Hire and running charges of tipper	Day	0.30	1 030.00	309.00
	Labour				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	2.50	135.25	338.12
	TOT AT				31252.00
	Add 1% for water charges except on (A)				177.51
	TOTAL				31429.51
	Add 15% for contractor's profit and overheads except on (A)				2689.28
	Cost for 20 metre pile				34 118.78
	Cost for 1 metre pile				1 705.94
	Say				1 705.95

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.4 500 mm dia. piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 0.50^2 = 3.925$ cum				
(A)	Rate as per item No 5.33 of SH :RCC work	cum	3.925	4147.40	16278.55
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	3.925	98.20	385.44
7183	Bentonite	tonne	0.28	2700.00	756.00
9999	Sundries	L.S.	87.95	1.00	87.95
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.60	28000.00	16800.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.38	4000.00	1520.00
0017	Hire and running charges of tipper	Day	0.30	1030.00	309.00
0018	Hire and running charges of loader.	Day	0.30	800.00	240.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
	Beldar	Day	2.50	135.25	338.12
	TOTAL				36853.24
	Add 1 % for water charges except on (A)				201.89
	TOTAL				37055.89
	Add 15% for contractor's profit and overheads except on (A)				3058.67
	Cost for 20 metre pile				40113.80
	Cost for 1 metre pile				2005.69
	Say				2005.70

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.5 600 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete $3.14/4x0.60^2x20= 5.65$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	5.65	4147.40	23432.81
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	5.65	98.20	554.83
7183	Bentonite	tonne	0.33	2700.00	891.00
9999	Sundries	L.S.	317.43	1.00	317.43
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.75	28000.00	21000.00
0025	Hire and running charges of light crane.	Day	0.06	2 000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.38	4 000.00	1 520.00
0017	Hire and running charges of tipper	Day	0.30	1 030.00	309.00
0018	Hire and running charges of loader.	Day	0.30	800.00	240.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				48809.00
	Add 1 % for water charges except on (A)				248.21
	TOTAL				49057.21
	Add 15% for contractor's profit and overheads except on (A)				3760.44
	Cost for 20 metre pile				52817.65
	Cost for 1 metre pile				2640.88
	Say				2640.90

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.6 750 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 15 m length of pile				
	MATERIAL				
	Concrete $3.14/4x0.75^2xl5 = 6.62$ cum				
(A)	Rate as per item No5.33 of SH : RCC work	cum	6.62	4147.40	27455.79
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	6.62	98.20	650.08
7183	Bentonite	tonne	0.30	2 700.00	810.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	131.58	1.00	131.58
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.70	28000.00	19600.00
0025	Hire and running charges of light crane.	Day	0.06	2 000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.75	4 000.00	3 000.00
0017	Hire and running charges of tipper	Day	0.30	1 030.00	309.00
0018	Hire and running charges of loader.	Day	0.30	800.00	240.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.14	151.50	21.21
0114	Beldar	Day	3.50	135.25	473.38
	TOTAL				52811.04
	Add 1 % for water charges except on (A)				247.05
	TOTAL				53.58.09
	Add 15% for contractor's profit and overheads except on (A)				3742.88
	Cost for 15 metre pile				56800.92
	Cost for 1 metre pile				3786.73
	Say				3786.75

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.7 1000 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 m length of pile				
	MATERIAL				
	Concrete $3.14/4x1.00^2x10 = 7.85$ cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	7.85	4147.40	32557.09
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	7.85	98.20	770.87
7183	Bentonite	tonne	0.35	2700.00	945.00
9999	Sundries	L.S.	175.89	1.00	175.89
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.69	28000.00	19320.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.75	4000.00	3 000.00
0017	Hire and running charges of tipper	Day	0.40	1030.00	412.00
0018	Hire and running charges of loader.	Day	0.40	800.00	320.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.16	151.50	24.24
0114	Beldar	Day	4.00	135.25	541.00
	TOTAL				58186.09
	Add 1 % for water charges except on (A)				248.58
	TOTAL				58434.67
	Add 15% for contractor's profit and overheads except on (A)				3766.01
	Cost for 10 metre pile				62200.68
	Cost for 1 metre pile				6 220.07
	Say				6 220.05

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

20.2.8 1200 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 9 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 1.20^2 \times 9 = 10.17$ cum				
(A)	Rate as per item No. 5.33 of SH : RCC work	cum	10.17	4147.40	42179.06
(A)	Rate as per Item No. 5.34.2, S.H.: R.C.C. work	cum	10.17	98.20	998.69
7183	Bentonite	tonne	0.385	2700.00	1 039.50
9999	Sundries	L.S.	290.79	1.00	290.79
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.67	28000.00	18760.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.75	4000.00	3000.00
0017	Hire and running charges of tipper	Day	0.50	1030.00	515.00
0018	Hire and running charges of loader.	Day	0.50	800.00	400.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.18	151.50	27.27
0114	Beldar	Day	4.50	135.25	608.62
	TOTAL				67938.93
	Add 1% for water charges except on (A)				247.61
	TOTAL				68186.54
	Add 15% for contractor's profit and overheads except on (A)				3751.32
	Cost for 9 metre pile				71937.86
	Cost for 1 metre pile				7 993.10
	Say				7 993.10

20.2 Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap

20.2.9 1500 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 9 m length of pile				
	MATERIAL				
	Concrete $3.14/4 \times 1.50^2 \times 9 = 15.90$ cum				
(A)	Rate as per item No. 5.33 SH : RCC work	cum	15.90	4147.40	65943.66
(A)	Rate as per Item No. 5.34.2, S.H.: R.C.C. work	cum	15.90	98.20	1561.38
7183	Bentonite	tonne	0.45	2700.00	1215.00

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries	L.S.	1.00	593.48	593.48
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.77	28000.00	21560.00
0025	Hire and running charges of light crane.	Day	0.10	2000.00	200.00
0026	Hire and running charges of bentonite pump.	Day	0.96	4000.00	3 600.00
0017	Hire and running charges of tipper	Day	0.75	1030.00	772.50
0018	Hire and running charges of loader.	Day	0.75	800.00	600.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.25	151.50	37.88
0114	Beldar	Day	5.00	135.25	676.25
	TOTAL				96760.15
	Add 1% for water charges except on (A)				292.55
	TOTAL				97052.70
	Add 15% for contractor's profit and overheads except on (A)				4432.15
	Cost for 9 metre pile				101 484.85
	Cost for 1 metre pile				11 276.09
	Say				11 276.10

20.3 Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 35 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto the bottom of pile cap):

20.3.1 300 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres				
	MATERIAL				
	R.C.C				
	Stem -3.14/4x$(0.30)^2$x9.625 = 0.680 cum				
	Bulb -3.14/4x$(0.75)^2$x0.075 = 0.033 cum				
	2x 3.14/4x$(0.525)^2$x0.150 = 0.065 cum				
	=0.778 cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	0.778	4147.40	3226.68
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	0.778	98.20	76.40
7183	Bentonite	tonne	0.08	2700.00	216.00
9999	Sundries	L.S.	410.92	1.00	410.92
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.03	2000.00	60.00
0026	Hire and running charges of bentonite pump.	Day	0.02	4000.00	80.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				14432.62
	Add 1% for water charges except on (A)				111.30
	TOTAL				14543.92
	Add 15% for contractor's profit and overheads except on (A)				1686.13
	Cost for 10 metre pile				16230.05
	Cost for 1 metre pile				1623.01
	Say				1623.00

20.3 Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 35 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap).

20.3.2 400 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres MATERIAL R.C.C Stem -3.14/4x(0.40)^{2}x9.30 = 1.169 cum Bulb -3.14/4x(1.00)^{2}x0.1 = 0.079 cum 2x 3.14/4x(0.7)^{2}x0.30 = 0.23 cum = 1.478 cum				
(A)	Rate as per item No 5.33 SH : RCC work	cum	1.478	4147.40	6129.86
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	1.478	98.20	145.14
7183	Bentonite	tonne	0.15	2700.00	405.00
9999	Sundries	L.S.	276.82	1.00	276.82
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.02	4000.00	80.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				17519.44
	Add 1% for water charges except on (A)				112.44
	TOTAL				17631.88
	Add 15% for contractor's profit and overheads except on (A)				1703.53
	Cost for 10 metre pile				19335.41
	Cost for 1 metre pile				1933.54
	Say				1933.55

20.3 Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 35 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap):

20.3.3 450 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres MATERIAL R.C.C Stem -3.14/4x(0.45)^{2}x9.212 = 1.465 cum Bulb -3.14/4x(1.125)^{2}x0.113 = 0.112 cum 2x 3.14/4x(0.788)^{2}x0.337 =0.329 cum = 1.906 cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	1.906	4147.40	7904.94

Code	Description	Unit	Quantity	Rate	Amount
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	1.906	98.20	187.17
7183	Bentonite	tonne	0.19	2 700.00	513.00
9999	Sundries	L.S.	194.81	1.00	194.81
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.02	4000.00	80.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				19362.54
	Add 1 % for water charges except on (A)				112.70
	TOTAL				19475.24
	Add 15% for contractor's profit and overheads except on (A)				1707.47
					21182.71
	Cost for 10 metre pile				21182.71
	Cost for 1 metre pile				2118.27
	Say				2118.25

20.3 Boring, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M 35 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap):

20.3.4 550 mm dia piles

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 metres MATERIAL R.C.C Stem -3.14/4x$(0.50)^2$x9.125 = 1.792 cum Bulb -3.14/4x$(1.25)^2$x0.125 = 0.153 cum 2x 3.14/4x$(0.875)^2$x0.375 = 0.451 cum = 2.396 cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	2.40	4147.40	9953.76
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	2.40	98.20	235.68
7183	Bentonite	tonne	0.20	2 700.00	540.00
9999	Sundries	L.S.	208.15	1.00	208.15
	MACHINERY				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.36	28000.00	10080.00
0025	Hire and running charges of light crane.	Day	0.06	2000.00	120.00
0026	Hire and running charges of bentonite pump.	Day	0.02	4000.00	80.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.08	151.50	12.12
0114	Beldar	Day	2.00	135.25	270.50
	TOTAL				21500.21
	Add 1% for water charges except on (A)				113.11
	TOTAL				21613.32
	Add 15% for contractor's profit and overheads except on (A)				1713.58
	Cost tor 10 metre pile				23326.90
	Cost for 1 metre pile				23326.90
	Say				2332.70

20.4 Extra over item No. 20.3 for providing additional bulb in under reamed piles, under specified diameter (Only the quantity of extra bulbs are to be paid).

20.4.1 300mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 bulb.				
	Materials :				
	Bulb - 0.033 cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	0.033	4147.40	136.86
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	0.033	98.20	3.24
7183	Bentonite	tonne	0.003	2700.00	8.10
	Machinery				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.02	28000.00	560.00
0025	Hire and running charges of light crane.	Day	0.01	2 000.00	20.00
0026	Hire and running charges of bentonite pump.	Day	0.01	4 000.00	40.00
	Labour				
0130	Work supervisior (Mistry)	Day	0.02	151.50	3.03
0114	Beldar	Day	1.00	135.25	135.25
	Total				906.48
	Add 1% for water charges except on (A).				7.66
	Total				914.14
	Add 15% for contractor's profit and overheads except on (A).				116.11
	Cost for 1 bulb				1030.25
	Say				1030.25

20.4 Extra over item No. 20.3 for providing additional bulb in under reamed piles, under specified diameter (Only the quantity of extra bulbs are to be paid).

20.4.2 400mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 bulb.				
	Materials:				
	Bulb - 0.063 cum				
(A)	Rate as per item No 5.33 of SH:RCC work	cum	0.063	4147.40	261.29
(A)	Rate as per Item No-5.34.2, S.H.: R.C.C. work	cum	0.063	98.20	6.19
7183	Bentonite	tonne	0.006	2700.00	16.20
	Machinery				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.02	28000.00	560.00
0025	Hire and running charges of light crane.	Day	0.01	2 000.00	20.00
0026	Hire and running charges of bentonite pump.	Day	0.01	4 000.00	40.00
	Labour				
0130	Work supervisior (Mistry)	Day	0.02	151.50	3.03
0114	Beldar	Day	1.00	135.25	135.25
	Total				1041.96
	Add 1% for water charges except on (A).				7.74
	Total				1049.70
	Add 15% for contractor's profit and overheads except on (A).				117.33
	Cost for 1 bulb				1167.03
	Say				1167.05

20.4 Extra over item No. 20.3 for providing additional bulb in under reamed piles, under specified diameter (Only the quantity of extra bulbs are to be paid).

20.4.3 450 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 bulb. Materials : Bulb-0.081 cum				
(A)	Rate as per item No 5.33 of SH : RCC work	cum	0.081	4147.40	335.94
(A)	Rate as per Item No 5.34.2 S.H.: R.C.C. work	cum	0.081	98.20	7.95
7183	Bentonite	tonne	0.008	2700.00	21.60
	Machinery				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.02	28000.00	560.00
0025	Hire and running charges of light crane.	Day	0.01	2000.00	20.00
0026	Hire and running charges of bentonite pump.	Day	0.01	4000.00	40.00
	Labour				
0130	Work supervisior (Mistry)	Day	0.02	151.50	3.03
0114	Beldar	Day	1.00	135.25	135.25
	Total				1123.77
	Add 1 % for water charges except on (A)				7.80
	Total				1131.57
	Add 15% for contractor's profit and overheads except on (A).				118.15
	Cost for 1 bulb				1249.72
	Say				1249.70

20.4 Extra over item No. 20.3 for providing additional bulb in under reamed piles, under specified diameter (Only the quantity of extra bulbs are to be paid).

20.4.4 550 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 bulb. Materials : Bulb-0.102 cum				
(A)	Rate as per item No-5.33 SH : RCC work	cum	0.102	4147.40	423.03
(A)	Rate as per Item No 5.34.2, S.H.: R.C.C. work	cum	0.102	98.20	10.02
7,183	Bentonite	tonne	0.01	2700.00	27.00
	Machinery				
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site.	Day	0.02	28000.00	560.00
0025	Hire and running charges of light crane.	Day	0.01	2000.00	20.00
0026	Hire and running charges of bentonite pump.	Day	0.02	4000.00	80.00
	Labour				
0130	Work supervisior (Mistry)	Day	0.02	151.50	3.03
0114	Beldar	Day	1.00	135.25	135.25
	Total				1258.33
	Add 1% for water charges except on (A).				8.25
	Total				1266.58
	Add 15% for contractor's profit and overheads except on (A).				125.03
	Cost for 1 bulb				1391.61
	Say				1391.60

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M 35 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia 40mm for grouting with cement sand grouting of mix 1:2(1 cement: 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.1 400 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x(0.40)^{2}x20 = 2.51 cum				
(A)	Rate as per item no 5.33 SH : RCC work	cum	2.51	4147.40	10409.97
(A)	Rate as Per Item no.5.34.2 S.H.: R.C.C. work	cum	2.51	98.20	246.48
(A)	Add Rate as per item no 5.19 SH : RCC work	cum	2.51	4953.40	12433.03
(A)	Deduct Rate as per item no 5.1.3 SH : RCC work	cum	2.51	3359.60	(-) 8432.60
	Cement mortar 1:2 for grout(Rate as per item3.7)	cum	0.025	3864.25	96.61
9999	Sundries	L.S.	442.00	1.00	442.00
7181	C.I. Shoes @ 80 kg per pile	Kilogram	80.00	40.00	3200.00
7182	M.S. shoes® 35 kg per pile	Kilogram	35.00	35.00	1225.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	Day	0.38	28000.00	10640.00
0028	Hire and running charges of crane 20 tonne capacity.	Day	0.06	8000.00	480.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				31164.42
	Add 1 % for water charges except on (A)				165.08
	TOTAL				31329.50
	Add 15% for contractor's profit and overheads except on (A)				2500.92
	Cost for 20 metre pile				33830.42
	Cost for 1 metre pile				1691.52
	Say				1691.50

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M 35 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia 40mm for grouting with cement sand grouting of mix 1:2 (1 cement: 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.2 450 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x(0.45)^{2}x20 = 3.18 cum				
(A)	Rate as per item no 5.33 SH : RCC work	cum	3.18	4147.40	13188.73

Code	Description	Unit	Quantity	Rate	Amount
(A)	Rate as per Item no 5.34.2 S.H.: R.C.C. work	cum	3.18	98.20	312.28
(A)	Add Rate as per item no 5.19 SH : RCC work	cum	3.18	4953.40	15751.81
(A)	Deduct Rate as per item no 5.1.3 SH : RCC work	cum	3.18	3359.60	(-) 10683.53
	Cement mortar 1:2 for grout	cum	0.025	3864.25	96.61
	Rate as per item no. 3.7				
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.00	442.00
	Pile shoes				
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3 200.00
7182	M.S. shoes @ 35 kg per pile	kilogram	35.00	35.00	1 225.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories.	Day	0.38	28000.00	10640.00
0028	Hire and running charges of crane 20 tonne capacity.	Day	0.06	8000.00	480.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	1.08	151.50	163.62
0114	Beldar	Day	10.78	135.25	1458.00
	TOTAL				36274.52
	Add 1 % for water charges except on (A)				177.05
	TOTAL				36451.57
	Add 15% for contractor's profit and overheads except on (A)				2682.34
	Cost for 20 metre pile				39133.91
	Cost for 1 metre pile				1956.70
	Say				1956.70

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M 35 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia, 40mm for grouting with cement sand grouting of mix 1:2 (1 cement: 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.3 500 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x$(0.50)^2$x20 = 3.925 cum				
(A)	Rate as per item no 5.33 SH : RCC . work	cum	3.925	4147.40	16278.55
(A)	Rate as per Item no 5.34.2. S.H.: R.C.C. work	cum	3.925	98.20	385.44
(A)	Add Rate as per item no 5.19 SH : RCC . work	cum	3.925	4953.40	19442.10
(A)	Deduct Rate as per item no 5.1.3 SH : RCC . work	cum	3.925	3359.60	(-) 13186.43
	Cement mortar 1:2 for grout	cum	0.025	3864.25	96.61
	(Rate as per item no. 3.7)				
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.00	442.00
	Pile shoes				
7181	C.I. Shoes @ 80 kg per pile	Kilogram	80.00	40.00	3200.00
7182	M.S. shoes @ 35 kg per pile	Kilogram	35.00	35.00	1225.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories.	Day	0.38	28000.00	10640.00

Code	Description	Unit	Quantity	Rate	Amount
0028	Hire and running charges of crane 20 tonne capacity.	Day	0.06	8000.00	480.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				39427.20
	Add 1% for water charges except on (A)				165.10
	TOTAL				39592.30
	Add 15% for contractor's profit and overheads except on (A)				2501.20
	Cost for 20 metre pile				42093.50
	Cost for 1 metre pile				2104.68
	Say				2104.70

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M 35 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia 40mm for grouting with cement sand grouting of mix 1:2(1 cement: 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.4 550 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
(A)	Concrete -3.14/4x$(0.55)^2$x20 = 4.75 cum				
(A)	Rate as per item no 5.33 SH : RCC work	cum	4.75	4147.40	19700.15
(A)	Rate as per Item no 5.34.2 S.H.: R.C.C. work	cum	4.75	98.20	466.45
(A)	Add Rate as per item no 5.19 SH : RCC work	cum	4.75	4953.40	23528.65
	Deduct Rate as per item no 5.1.3 SH : RCC work	cum	4.75	3359.60	(-) 15958.10
	Cement mortar 1:2 for grout (Rate as per item no. 3.7)	cum	0.025	3864.25	96.61
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.00	442.00
	Pile shoes				
7181	C.I. Shoes @ 80 kg per pile	Kilogram	80.00	40.00	3200.00
7182	M.S. shoes @ 35 kg per pile	Kilogram	35.00	35.00	1225.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories.	Day	0.38	28000.00	10640.00
0028	Hire and running charges of crane 20 tonne capacity.	Day	0.06	8000.00	480.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				44244.69
	Add 1% for water charges except on (A)				165.08
	TOTAL				44409.77
	Add 15% for contractor's profit and overheads except on (A)				2500.89
	Cost for 20 metre pile				46910.66
	Cost for 1 metre pile				2345.53
	Say				2345.55

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M 35 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia 40mm for grouting with cement sand grouting of mix 1:2 (1 cement: 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.5 750 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x(0.75)^{2}x20 = 10.88 cum				
(A)	Rate as per item no 5.33 SH : RCC work	cum	10.88	4147.40	45123.71
(A)	Rate as per Item no 5.34.2 S.H.: R.C.C. work	cum	10.88	98.20	1068.42
(A)	Add Rate as per item no 5.19 SH : RCC work	cum	10.88	4953.40	53892.99
(A)	Deduct Rate as per item no 5.1.3 SH : RCC work	cum	10.88	3 359.60	(-) 36552.45
	Cement mortar 1:2 for grout	cum	0.025	3 864.25	96.61
	Rate as per item no. 3.7				
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.00	442.00
	Pile shoes				
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3 200.00
7182	M.S. shoes @ 35 kg per pile	kilogram	35.00	35.00	1 225.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	Day	0.38	28 000.00	10640.00
0028	Hire and running charges of crane 20 tonne capacity.	Day	0.06	8 000.00	480.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				80040.21
	Add 1 % for water charges except on (A)				165.08
	TOTAL				80205.29
	Add 15% for contractor's profit and overheads except on (A)				2500.89
	Cost for 20 metre pile				82706.18
	Cost for 1 metre pile				4135.31
	Say				4135.30

20.5 Providing, driving and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M 35 cement concrete to carry safe working load not less than specified. With a central through preformed hole with M.S. black pipe of dia 40mm for grouting with cement sand grouting of mix 1:2(1 cement: 2 coarse sand) under sufficient positive pressure to ensure complete filling including centering, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).

20.5.6 1000 mm dia piles.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20 m length of pile				
	MATERIAL				
	Concrete -3.14/4x(1.00)^{2}x20 =15.70 cum				

Code	Description	Unit	Quantity	Rate	Amount
(A)	Rate as per item no 5.33 SH : RCC work	cum	15.70	4147.40	65114.18
(A)	Rate as per Item no 5.34.2 S.H.: R.C.C. work	cum	15.70	98.20	1541.74
(A)	Add Rate as per item no 5.19 SH : RCC work	cum	15.70	4953.40	77768.38
(A)	Deduct Rate as per item no 5.1.3 SH : RCC work	cum	15.70	3359.60	(-) 52745.72
	Cement mortar 1:2 for grout	cum	0.025	3864.25	96.61
	Rate as per item no. 3.7				
9999	Wooden block @ 1 block per two piles	L.S.	442.00	1.00	442.00
	Pile shoes				
7181	C.I. Shoes @ 80 kg per pile	kilogram	80.00	40.00	3200.00
7182	M.S. shoes @ 35 kg per pile	kilogram	35.00	35.00	1225.00
	MACHINERY				
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories .	Day	0.38	28000.00	10640.00
0028	Hire and running charges of crane 20 tonne capacity.	Day	0.06	8000.00	480.00
	LABOUR				
0130	Work supervisor (Mistri)	Day	0.12	151.50	18.18
0114	Beldar	Day	3.00	135.25	405.75
	TOTAL				108 186.12
	Add 1 % for water charges except on (A)				165.08
	TOTAL				108 351.20
	Add 15% for contractor's profit and overheads except on (A)				2 500.89
	Cost for 20 metre pile				110 852.09
	Cost for 1 metre pile				5542.60
	Say				5542.60

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.

20.6.1 Single pile upto 50 tonne capacity

20.6.1.1 Initial test.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7246	Cost per test	Per test	1.00	19500.00	19500.00
	TOTAL				19500.00
	Add 1 % for water charges				195.00
	TOTAL				19695.00
	Add 15% for contractor's profit and overheads				2954.25
	Cost per test				22649.25
	Say				22649.20

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.

20.6.1 Single pile upto 50 tonne capacity

20.6.1.2 Routine test

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7249	Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including prepration of pile head etc. for Single pile upto 50 tonne capacity	per test	1.00	11500.00	11500.00

Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				11 500.00
	Add 1 % for water charges				115.00
	TOTAL				11615.00
	Add 15% for contractor's profit and overheads				1 742.25
	Cost per test				13 357.25
	Say				13 357.20

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer-in-charge.

20.6.2 Single pile above 50 tonne and upto 100 tonne capacity

20.6.2.1 Initial test

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7247	Cost per test	per test	1.00	27500.00	27500.00
	TOTAL				27500.00
	Add 1 % for water charges				275.00
	TOTAL				27775.00
	Add 15% for contractor's profit and overheads				4 166.25
	Cost per test				31941.25
	Say				31941.20

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer-in-charge.

20.6.2 Single pile above 50 tonne and upto 100 tonne capacity

20.6.2.2 Routine test.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7250	Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including prepration of pile head etc. forSingle pile above 50 tonne capacity pile and upto 100 tonne capacity pile	per test	1.00	8000.00	18000.00
	TOTAL				18000.00
	Add 1 % for water charges				180.00
	TOTAL				18180.00
	Add 15% for contractor's profit and overheads				2727.00
	Cost per test				20907.00
	Say				20907.00

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer-in-charge.

20.6.3 Group of two or more piles upto 50 tonne capacity

20.6.3.1 Initial test

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7248	Cost per test	per test	1.00	37500.00	37500.00
	TOTAL				37 500.00
	Add 1% for water charges				375.00
	TOTAL				37875.00
	Add 15% for contractor's profit and overheads				5681.25
	Cost per test				43556.25
	Say				43556.20

20.6 Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer-in-charge.

20.6.3 Group of two or more piles upto 50 tonne capacity

20.6.3.2 Routine test

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7251	Cost per test	per test	1.00	23000.00	23000.00
	TOTAL				23 000.00
	Add 1 % for water charges				230.00
	TOTAL				23 230.00
	Add 15% for contractor's profit and overheads				3 484.50
	Cost per test				26 714.50
	Say				26 714.50

20.7 Cyclic vertical load testing of pile in accordance with IS Code of practice IS : 2911 (part IV) including preparation of pile head etc for.

20.7.1 Single pile.

20.7.1.1 Upto 50 tonne capacity pile.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7249	cost per test	per test	1.00	11500.00	11500.00
	TOTAL				11 500.00
	Add 1 % for water charges				115.00
	TOTAL				11615.00
	Add 15% for contractor's profit and overheads				1742.25
	Cost per test				13357.25
	Say				13357.20

20.7 Cyclic vertical load testing of pile in accordance with IS Code of practice IS : 2911 (part IV) including preparation of pile head etc for.

20.7.1 Single pile.

20.7.1.2 Above 50 tonne and upto 100 tonne capacity pile.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7250	Cyclic verticle load testing of piles in accordance with IS : 2911 (Part-IV) including prepration of pile head etc. forSingle pile above 50 tonne capacity pile and upto 100 tonne capacity pile	per test	1.00	18000.00	18000.00
	TOTAL				18000.00
	Add 1% for water charges'				180.00
	TOTAL				18180.00
	Add 15% for contractor's profit and overheads				2727.00
	Cost per test				20907.00
	Say				20907.00

20.7 Cyclic vertical load testing of pile in accordance with IS Code of practice IS : 2911 (part IV) including preparation of pile head etc for.

20.7.2 Group of two piles.

20.7.2.1 Upto 50 tonne capacity each .

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7251	Cost per test	per test	1.00	23000.00	23000.00
	TOTAL				23000.00
	Add 1 % for water charges				230.00
	TOTAL				23230.00
	Add 15% for contractor's profit and overheads				3 484.50
	Cost per test				26714.50
	Say				26714.50

20.8 Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :

20.8.1 Upto 50 tonne capacity pile.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7252	Cost per test	per test	1.00	11500.00	11500.00
	TOTAL				11500.00
	Add 1 % for water charges				115.00
	TOTAL				11615.00
	Add 15% for contractor's profit and overheads				1742.25
	Cost per test				13357.25
	Say				13357.20

20.8 Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :

20.8.2 Above 50 tonne and upto 100 tonne capacity pile.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 test				
7253	Cost per test	per test	1.00	18000.00	18000.00
	TOTAL				18000.00
	Add 1% for water charges				180.00
	TOTAL				18180.00
	Add 15% for contractor's profit and overheads				2727.00
	Cost per test				20907.00
	Say				20907.00

SUB HEAD : 21.0

ALUMINIUM WORK

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required EPDM rubber/ Neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately):

21.1.1 For fixed portion.

21.1.1.1 Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 40.02 kg MATERIAL : Aluminium Section (i) External member of the frame (Jindal section no 4605) V = 2x2.40 = 4.80 m H = 2x3x0.95 = 5.70 m = 10.50 m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) V = 2x2.40 = 4.80 m H = 1x3x0.95 = 2.85 m = 7.65 m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) 2x6x2 (1.14+0.95) = 50.16 m Snap beading = 50.16 m @ 0.176 kg/m = 8.33 kg (iv) Angle cleat 38x38x4.8 mm 50 mm long 18x0.05 = 0.900 m @ 0.985 kg/m = 0.89 kg Sub total =40.02 kg Add 5% wastage = 2.00 kg				
7306	Total = 42.02 kg	kilogram	42.02	195.00	8 193.90
0589	(v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 nos	100 Nos	72	63.00	45.36
7019	(vi) Dash hold fastners	each	12	8.00	96.00
7389	(vii) Anodising	kilogram	42.02	32.00	1344.64
9999	(viii) Carriage of material	L.S.	52.00	1.00	52.00
	LABOUR For fabrication of frame				
0116	Fitter	Day	0.62	151.50	93.93
0139	Beldar (Special)	Day	0.54	138.45	74.76
0114	Beldar	Day	0.36	135.25	48.69
0100	Bandhani	Day	0.04	138.45	5.54
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners & sundries	L.S.	52.00	1.00	52.00
	TOTAL				10 006.82
	Add 1 % for water charges				100.07
	TOTAL				10 106.89
	Add 15% for contractor's profit and overheads				1516.03
	Cost for 40.02 kg				11622.92
	Cost for 1 kg				290.43
	Say				290.45

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required EPDM rubber/ Neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately):

2l.1.1 For fixed portion.

2.1.1.2 Powder coated aluminium (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 40.02 kg				
	MATERIAL : Aluminium Section				
	(i) External member of the frame (Jindal section no 4605)				
	V= 2x2.40 = 4.80 m				
	H = 2x3x0.95 = 5.70 m				
	= 10.50 m @ 1.653 kg/m = 17.36 kg				
	(ii) Internal member of the frame (Jindal section no 4604)				
	V- 2x2.40 = 4.80 m				
	H= 1x3x0.95= 2.85 m				
	= 7.65 m @ 1.692 kg/m = 12.94 kg				
	(iii) Aluminium snap beading on both side (Jindal section no 4407)				
	2x6x2 (1.14+0.95) = 50.16 m				
	Snap beading = 50.16 m @ 0.176 kg/m = 8.33 kg				
	(iv) Angle cleat 38x38x4.8 mm 50 mm long				
	18x0.05 = 0.900 m @ 0.985 kg/m = 0.89 kg				
	Sub total =40.02 kg				
	Add 5% wastage = 2.00 kg				
7306	Total = 42.02 kg	Kilogram	42.02	195.00	8193.90
0589	(v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 nos	100 Nos	72	63.00	45.36
7019	(vi) Dash hold fastners	each	12	8.00	96.00
7392	Epoxy powder coating 50 microns on aluminium sections.	Kilogram	42.02	45.00	1890.00
9999	(viii) Carriage of material	L.S	52.00	1.00	52.00
	LABOUR				
	For fabrication of frame				
0116	Fitter	Day	0.62	151.50	93.93
0139	Beldar (Special)	Day	0.54	138.45	74.76
0114	Beldar	Day	0.36	135.25	48.69
0100	Bandhani	Day	0.04	138.45	5.54
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners & sundries	L.S.	52.00	1.00	52.00
	TOTAL				10553.08
	Add 1% for water charges				105.53
	TOTAL				10658.61
	Add 15% for contractor's profit and overheads				1598.79
	Cost for 40.02 kg				12257.40
	Cost for 1 kg				306.28
	Say				306.30

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required EPDM rubber/ Neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately):

21.1.1 For fixed portion.

21.1.1.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 40.02 kg MATERIAL : Aluminium Section (i) External member of the frame (Jindal section no 4605) V= 2x2.40 = 4.80 m H = 2x3x0.95 = 5.70 m = 10.50 m @ 1.653 kg/m = 17.36 kg (ii) Internal member of the frame (Jindal section no 4604) V= 2x2.40 = 4.80 m H= 1x3x0.95= 2.85 m = 7.65 m @ 1.692 kg/m = 12.94 kg (iii) Aluminium snap beading on both side (Jindal section no 4407) 2x6x2 (1.14+0.95) = 50.16 m Snap beading = 50.16 m @ 0.176 kg/m = 8.33 kg (iv) Angle cleat 38x38x4.8 mm 50 mm long 18x0.05 = 0.900 m @ 0.985 kg/m = 0.89 kg Sub total =40.02 kg Add 5% wastage = 2.00 kg				
7306	Total = 42.02 kg	Kilogram	42.02	195.00	8193.90
0589	(v) C.P. brass /stainless steel screws 20 mm for cleat angle 18x4 = 72 nos	100 Nos	72.0	63.00	45.36
7019	(vi) Dash hold fastners	each	12.0	8.00	96.00
7393	Polyester powder coating 50 microns on aluminium sections	Kilogram	42.02	50.00	2101.00
9999	(viii) Carriage of material	L.S.	52.00	1.00	52.00
	LABOUR For fabrication of frame				
0116	Fitter	Day	0.62	151.50	93.93
0139	Beldar (Special)	Day	0.54	138.45	74.76
0114	Beldar	Day	0.36	135.25	48.69
0100	Bandhani	Day	0.04	138.45	5.54
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners & sundries	L.S.	52.00	1.00	52.00
	TOTAL				10763.18
	Add 1% for water charges				107.63
	TOTAL				10870.81
	Add p6% for contractor's profit and overheads				1630.62
	Cost for 40.02 kg				12501.43
	Cost for 1 kg				312.38
	Say				312.40

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required EPDM rubber/ Neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately):

21.1.2 For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).

21.1.2.1 Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20.21 kg MATERIAL (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg (iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg (v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m @ 0.176 kg/m = 2.51 kg (vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg				
7306	Total = 21.65 kg	kilogram	21.65	195.00	4 221.75
0689	(viii) Aluminium hinges 100x75x4 mm (ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12	10 Nos	4.00	416.00	166.40
0589	Total = 92 nos	100 Nos	92.00	63.00	57.96
7389	(x) Anodising AC 15	kilogram	21.65	32.00	692.80
9999	(xi) Carriage of material	L.S.	31.20	1.00	31.20
7390	(xii) Neoprene/ EPDM gasket in groove of meeting style LABOUR For fabrication	metre	2.35	22.00	51.70

Code	Description	Unit	Quantity	Rate	Amount
0116	Fitter	Day	0.32	151.50	48.48
0139	Beldar (Special)	Day	0.28	138.45	38.77
0114	Beldar	Day	0.18	135.25	24.34
0100	Bandhani	Day	0.20	138.45	27.69
	For fixing the shutter including hinges :				
0111	Carpenter 1 st class	Day	0.06	151.50	9.09
0114	Beldar	Day	0.04	135.25	5.41
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	26.00	1.00	26.00
	TOTAL				5 401.59
	Add 1 % for water charges				54.02
	TOTAL.				5 455.61
	Add 15% for contractor's profit and overheads				818.34
	Cost for 20.21 kg				6 273.95
	Cost for lkg				310.44
	Say				310.45

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required EPDM rubber/ Neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately):

21.1.2 For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).

21.1.2.2 Powder coated aluminium (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20.21 kg MATERIAL (i) Hanging style (Jindal section no 4524) 1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg (ii) Meeting style (Jindal section no 4526) 1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg (iii) Top & bottom rail (Jindal section no 4510) 2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg (iv) Lock rail (Jindal section no 4524) 1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg (v) Glazing plate (Jindal section no 440) on one side of lock rail 1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg (vi) Aluminium snap beading (Jindal section no 4497) on both side 2x2 (0.75+1.26) = 8.04 m 2x2 (0.75+0.81) = 6.24 m = 14.28 m@ 0.176 kg/m = 2.51 kg				

Code	Description	Unit	Quantity	Rate	Amount
	(vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long 3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg Sub total = 20.62 kg Add 5% wastage = 1.03 kg				
7306	Total = 21.65 kg	Kilogram	21.65	195.00	4221.75
0689	(viii) Aluminium hinges 100x75x4 mm	10 Nos	4.00	416.00	166.40
	(ix) C.P. brass /stainless steel screws 20 mm For cleat 12x4 = 48 For cleat 4x8 = 32 For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12				
0589	Total = 92 nos	100 Nos	92.00	63.00	57.96
7392	(x) Expoxy powoder coating 50micron on aluminium section	Kilogram	21.65	45.00	974.25
9999	(xi) Carriage of material	L.S.	31.20	1.00	31.20
7390	(xii) Neoprene/ EPDM rubber gasket in groove of meeting style	metre	2.35	22.00	51.70
	LABOUR For fabrication				
0116	Fitter	Day	0.32	151.50	48.48
0139	Beldar (Special)	Day	0.28	138.45	38.77
0114	Beldar	Day	0.18	135.25	24.34
0100	Bandhani	Day	0.20	138.45	27.69
	For fixing the shutter including hinges:				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
0114	Beldar	Day	0.04	135.25	5.41
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	26.00	1.00	26.00
	TOTAL				5683.04
	Add 1 % for water charges				56.83
	TOTjAt				5739.87
	Addjfb% for contractor's profit and overheads				860.98
	Cost for 20.21 kg				6600.85
	Cost for 1 kg				326.61
	Say				326.60

21.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required EPDM rubber/ Neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately):

21.1.2 For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).

21.1.2.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 20.21 kg				
	MATERIAL				
	(i) Hanging style (Jindal section no 4524)				
	1x2.35 = 2.35 m @ 2.53 kg/m = 5.95 kg				
	(ii) Meeting style (Jindal section no 4526)				
	1x2.35 = 2.35 m @ 2.465 kg/m = 5.79 kg				
	(iii) Top & bottom rail (Jindal section no 4510)				
	2x0.75 = 1.50 m @ 2.48 kg/m = 3.72 kg				
	(iv) Lock rail (Jindal section no 4524)				
	1x0.75 = 0.75 m @ 2.53 kg/m = 1.90 kg				
	(v) Glazing plate (Jindal section no 440) on one side of lock rail				
	1x0.75 = 0.75 m @ 0.459 kg/m = 0.34 kg				
	(vi) Aluminium snap beading (Jindal section no 4497) on both side				
	2x2 (0.75+1.26) = 8.04 m				
	2x2 (0.75+0.81) = 6.24 m				
	= 14.28 m @ 0.176 kg/m = 2.51 kg				
	(vii) Aluminium angle cleat 38x38x4.8 mm 35 mm long				
	3x4x0.035 = 0.42 m @ 0.985 kg/m = 0.41 kg				
	Sub total = 20.62 kg				
	Add 5% wastage = 1.03 kg				
7306	Total = 21.65 kg	Kilogram	21.65	195.00	4221.75
0689	(viii) Aluminium hinges 100x75x4 mm	10 Nos	4.00	416.00	166.40
	(ix) C.P. brass /stainless steel screws 20 mm				
	For cleat 12x4 = 48				
	For cleat 4x8 = 32				
	For glazing plate @ 15 cm centre to centre in 75 cm length 2x6 = 12				
0589	Total = 92 nos	100 Nos	92.0	63.00	57.96
7393	(X)Polyester powder coating 50 microns on aluminium sections	Kilogram	21.65	50.00	1082.50
9999	(xi) Carriage of material	L.S.	31.20	1.00	31.20
7390	(xii) Neoprene/ EPDM rubber gasket in groove of meeting style	metre	2.35	22.00	51.70
	LABOUR				
	For fabrication				
0116	Fitter	Day	0.32	151.50	48.48
0139	Beldar (Special)	Day	0.28	138.45	38.77
0114	Beldar	Day	0.18	135.25	24.34
0100	Bandhani	Day	0.20	138.45	27.69
	For fixing the shutter including hinges :				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
0114	Beldar	Day	0.04	135.25	5.41
9999	Labour for making provision for fittings and carriage of screws etc. including sundries	L.S.	26.00	1.00	26.00
	TOTAL				5791.29
	Add 1% for water charges				57.91
	TOTAL				5 849.20
	Add 15% for contractor’s profit and overheads				877.38
	Cost for 20.21 kg				6 726.58
	Cost for 1 kg				332.83
	Say				332.85

21.2 Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade 1 Type II in panelling fixed in aluminium doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.

21.2.1 Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 7 sqm				
	MATERIAL				
	12 mm thick particle board = 7.00 sqm				
	Add 5% wastage = 0.35 sqm				
7477	= 7.35 sqm	sqm	7.35	595.00	4 373.25
9999	Carriage of particle board	L.S	13.65	1.00	13.65
9999	Sundries & screws etc.	L.S.	27.30	1.00	27.30
	LABOUR:				
0112	Carpenter 2nd class	Day	0.90	141.60	127.44
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				4 676.89
	Add 1% for water charges				46.77
	TOTAL				4 723.66
	Add 15% for contractor's profit and overheads				708.55
	Cost for 7 sqm				5 432.21
	Cost for 1 sqm				776.03
	Say				776.05

21.2 Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade 1 Type 11, in panelling fixed in aluminium doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.

21.2.2 Prelaminated particle board with decorative lamination on both sides.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 7 sqm				
	MATERIAL				
	12 mm thick particle board = 7.00 sqm				
	Add 5% waistage = 0.35 sqm.				
7480	Total =7.35 sqm	sqm	7.35	625.00	4593.75
9999	Carriage of particle board	L.S.	13.65	1.00	13.65
9999	Sundries & screws etc.	L.S.	27.30	1.00	27.30
	LABOUR:				
0112	Carpenter 2nd class	Day	0.90	141.60	127.44
0114	Beldar	Day	1.00	135.25	135.25
	TOTAL				4897.39
	Add 1 % for water charges				48.97
	TOTAL-				4 946.36
	Add 15% for contractor's profit and overheads				741.95
	Cost for 7 sqm				5 688.31
	Cost for 1 sqm				812.62
	Say				812.60

21.3 Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):

21.3.1 With float glass panes of 4.0 mm thickness

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 sqm				
	MATERIAL				
	FloatGlass panes 4.00 mm thick 1.00 sqm				
	Add for waistage and brecakage 10%-0.10 sqm.				
2406	Total =1.10 sqm.	sqm	1.10	248.00	272.80
9999	Carriage of glass	L.S.	2.42	1.00	2.42
7390	Neoprene/ EPDM rubber gasket	metre	6.00	22.00	132.00
	LABOUR:				
0112	Glazier	Day	0.23	141.00	32.57
0114	Beldar	Day	0.23	135.00	31.11
9999	Sundries and carriage of gasket	L.S.	6.89	1.00	6.89
	TOTAL				477.79
	Add 1% for water charges				4.78
	TOTAL				482.57
	Add 15% for contractor's profit and overheads				72.39
	Cost for 1 sqm				554.96
	Say				554.95

21.3 Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):

21.3.2 With float glass panes of 5.50 mm thickness

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 sqm				
	MATERIAL				
	Glass panes 5.50 mm thick = 1.00 sqm				
	Add for waistage and brcakge 10%= 0.10 sqm				
2407	Total =1.00 sqm	sqm	1.10	340.00	374.00
9999	Carriage of glass	L.S.	3.33	1.00	3.33
7390	Neoprene/ EPDM rubber gasket	metre	6 .00	22.00	132.00
	LABOUR:				
0112	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.23	135.25	31.11
9999	Sundries and carriage of gasket	L.S.	6.89	1.00	6.89
	TOTAL				579.90
	Add 1% for water charges				5.80
	TOTAL				585.70
	Add 15% for contractor's profit and overheads				87.86
	Cost for 1 sqm				673.56
	Say				673.55

21.3 Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):

21.3.3 With float glass panes of 8 mm thickness

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 sqm				
	MATERIAL				
	A Float Glass Pones 8.00 mm thick = 1.00 sqm				
	Add for waistage and brcakge 10%= 0.10 sqm				
2406	Total =1.10 sqm	sqm	1.10	248.00	272.80
9999	Carriage of glass	L.S.	3.33	1.00	3.33
7390	Neoprene/ EPDM rubber gasket	metre	6.00	22.00	132.00
	LABOUR:				
0112	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.23	135.25	31.11
9999	Sundries and carriage of gasket	L.S.	6.89	1.00	6.89
	TOTAL				478.70
	Add 1 % for water charges				4.79
	TOTAL				483.49
	Add 15% for contractor's profit and overheads				72.52
	Cost for 1 sqm				556.01
	Say				556.00

21.4 Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-chargs.

21.4.1 With stainless steel cover plate

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one number				
	MATERIAL				
7394	Double action hydraulic floor spring with sfainlessysteel cover plate	each	1.00	1 400.00	1400.00
9999	Carriage	L.S.	13.00	1.00	13.00
9999	Sundries and screws	L.S.	26.00	1.00	26.00
	Cement concrete 1:2:4				
(A)	(Rate as per item no 4.1.3 SH : CC)	cum	0.002	3257.45	6.51
	LABOUR:				
	For cutting hole and making it good				
0123	Mason 1st class	Day	0.08	151.50	12.12
0124	Mason 2nd class	Day	0.08	141.60	11.33
0112	Carpenter 2nd class for fixing	Day	0.01	141.60	1.42
0114	Beldar	Day	0.17	135.25	22.99
	TOTAL				1493.37
	Add 1 % for water charges except on (A)				14.87
	TOTAL				1508.24
	Add 15% for contractor's profit and overheads except on (A)				225.26
	Cost for each				1733.50
	Say				1733.50

21.4 Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.

21.4.2 With brass cover plate

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one number				
	MATERIAL				
7396	Double action hydraulic floor spring with brass cover plate	each	1.0	1550.00	1 550.00
9999	Carriage	L.S.	13.00	1.00	13.00
9999	Sundries and screws	L.S.	26.00	1.00	26.00
	Cement concrete 1:2:4				
(A)	(Rate as per item no 4.1.3 SH : CC)	cum	0.002	3257.45	6.51
	LABOUR:				
	For cutting hole and making it good				
0123	Mason 1 st class	Day	0.08	151.50	12.12
0124	Mason 2nd class	Day	0.08	141.60	11.33
0112	Carpenter 2nd class for fixing	Day	0.01	141.60	1.42
0114	Beldar	Day	0.17	135.25	22.99
	TOTAL				1643.37
	Add 1 % for water charges except on (A)				16.37
	TOTAL				1659.74
	Add 15% for contractor's profit and overheads except on (A)				247.98
	Cost for each				1907.72
	Say				1907.70

21.5 Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6«mm dia. with necessary cadmium plated machine screws all complete as per approved architectural drawings and direction of the Engineer-in-charge (level adjusting hangers, ceiling cleats and expansion hold fasteners to be paid for separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 6.35 kg (2.40x2.40 = 5.76 sqm) MATERIAL (i) Aluminium main runner - assuming Tee of size 35x23.5x1.5 mm @ 600 mm centre to centre 3.00x2.40m, =7.20m Extra for light fittings 2x1.20 m = 2.40 m = 9.60 m @ 0.247 kg/m = 2.370 kg Aluminium cross runner - assuming Tee of size 35x23.5x1.5 mm @ 600 mm centre to centre 3x4x0.60 m = 7.20 m (-) 2x0.30 = (-) 0.60 m =6.60 m @ 0.247 kg/m = 1.630 kg Perimeter angle aluminium - assuming size 25.4x25.4xl .63 mm @ 600 mm centre to centre 4x2.40 m = 9.60 m @ 0.213 kg/m = 2.045 kg (ii) CLEATS Aluminium angle- assuming size				

Code	Description	Unit	Quantity	Rate	Amount
	25.4x25.4xl.63 mm Extra for light fittings =3x2x2 = 12.00 Corner = 4.00 For joining runners = 42.00 = 58.00x0.025 = 1.45 m@ 0.213 kg/m = 0.309 kg Sub total =6.354 kg Add 5% wastage = 0.318 kg				
7306	= 6.672 kg	Kilogrm	6.672	195.00	1301.04
0589	(iii) C.P. brass/ stainless steel screws 20 mm for angle cleats	100 Nos	1.16	63.00	0.73
7048	(iv) Rawl plug for fixing perimeter angles	each	24.0	7.00	168.00
7392	Epoxy powder coating 50 microns on aluminium sections,	Kilogram	6.67	45.00	300.15
9999	(vi) Carriage of material	L.S.	13.00	1.00	13.00
9999	(vii) C.P. brass screws for fixing frame with suspenders	L.S.	13.00	1.00	13.00
	LABOUR For fabrication and erection				
0111	Carpenter 1st class	Day	0.64	151.50	96.96
0114	Beldar	Day	0.64	135.25	86.56
9999	Scaffolding and sundries	L.S.	13.00	1.00	13.00
	TOTAL				1992.44
	Add 1% for water charges				19.92
	TOTAL				2012.36
	Add 15% for contractor's profit and overheads				301.85
	Cost for 6.35 kg				2314.21
	Cost for 1 kg				364.44
	Say				364.45

21.6 Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200mm length) fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3mm size 60mm long and expansion hold fasteners 12.5 mm dia. 40mm long complete as per direction of Engineer -in-charge.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 23 nos (hangers in 2.40 mx 2.40 m = 5.76 sqm)one number MATERIAL 6 mm dia G.I. adjustable hangers including clips (upto 1.20 metre length) For light fiting 2x4=8.00 Nos For runners = 15.00 total = 23.00 Nos				
7395	6 mm dia. G.I. adjustable hangers including clips (upto 1.2 m length)	each	23.00	25.00	575.00
	Ceiling cleats G.I. flat 40X3 mm 60mm long 23x0.06= 1.38m@0.95kg/m= 1.31kg Add 5% wastage = 0.07 kg				
0992	= 1.38 kg	quintal	0.014	3450.00	48.30
7388	Dash fastner 12.5 mm dia 40 mm long with 6 mm dia bolts	each	23.0	30.00	690.00
9999	Carriage of materials	L.S.	5.20	1.00	5.20

Code	Description	Unit	Quantity	Rate	Amount
	LABOUR:				
0111	Carpenter 1 st class	Day	0.35	151.50	53.02
0114	Beldar	Day	0.27	135.25	36.52
	TOTAL				1408.04
	Add 1 % for water charges				14.08
	TOTAL				1422.12
	Add 15% for contractor's profit and overheads				213.32
	Cost for 23 hangers				1635.44
	Cost for one hanger				71.11
	Say				71.10

21.7 Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving screws, over expansion joints on vertical surfaces/ceilings with full threaded, cadmium plated steel screws 4mm dia. stem, 30mm long and aluminium washers 2mm thick, 15mm dia. at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete.

21.7.1 Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 7.00 kg				
	MATERIAL				
	Anodised aluminium sheet 2.5 mm thick, 170 mm wide				
	5.88m x0.17m = 1.00 sqm @ 7.00 Kg/sqm = 7.00kg				
	Add 5% wastage = 0.035 kg				
2704	Total = 7.35 kg	kilogram	7.35	195.00	1 433.25
7389	Anodising 15 microns on aluminium sections	kilogram	7.35	32.00	235.20
7347	Cadmium plated full threaded steel screws 30 mm x 4 mm dia	100 Nos	30.00	23.00	6.90
7348	Aluminium washers 2 mm 15 mm dia	100 Nos	30.00	7.00	2.10
7313	Expandable plastic sleeves	each	30.00	7.00	210.00
9999	Carriage of materials	L.S.	6.50	1.00	6.50
	LABOUR				
0112	Carpenter 2nd class	Day	0.392	141.60	55.51
0114	Beldar	Day	0.392	135.25	53.02
9999	Sundries including machine work	L.S.	21.45	1.00	21.45
	TOTAL				2023.93
	Add 1% for water charges				20.24
	TOTAL				2044.17
	Ada 15% for contractor's profit and overheads				306.63
	Cost for 7.00 kg				2350.80
	Cost for 1 kg				335.83
	Say				335.85

21.7 Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving screws, over expansion joints on vertical surfaces/ceilings with full threaded, cadmium plated steel screws 4mm dia. stem, 30mm long and aluminium

washers 2mm thick, 15mm dia. at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface ancTproviding expandable plastic sleeves in holes etc. complete.

21.7.2 Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 7.00 kg				
	MATERIAL				
	Anodised aluminium sheet 2.5 mm thick, 170 mm wide				
	5.88 mm x0.17m =1.00 m@ 7.00kg/sqm wide				
	Add 5% wastage = 0.35 kg				
2704	Total = 7.35 kg	kilogram	7.35	195.00	1433.25
7392	Epoxy powder coating 50 microns on aluminium sections.	kilogram	7.35	45.00	330.75
7347	Cadmium plated full threaded steel screws 30 mm x 4 mm dia	100 Nos	30	23.00	6.90
7348	Aluminium washers 2 mm 15 mm dia	100 Nos	30	7.00	2.10
7313	Expandable plastic sleeves	each	30	7.00	210.00
9999	Carriage of materials	L.S	6.50	1.00	6.50
	LABOUR				
0112	Carpenter 2nd class	Day	0.392	141.60	55.51
0114	Beldar	Day	0.392	135.25	53.02
9999	Sundries including machine work	L.S.	21.45	1.00	21.45
	TOTAL				2119.48
	Add 1 % for water charges				21.19
	TOTAL				2140.67
	Add 15% for contractor's profit and overheads				321.10
	CostTor 7.00 kg				2461.77
	Cost for 1 kg				351.68
	Say				351.70

21.8 Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.

21.8.1 Upto 5mm depth and 5 mm width

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 metre				
	MATERIAL				
8646	Silicon sealant (i/c 5% wastage)	Cartridge	0.087	281.00	24.45
8654	Masking tape.	metre	2.00	1.40	2.80
9999	Sundries & profile	L.S	2.60	1.00	2.60
9999	Labour	L.S	20.80	1.00	20.80
	TOTAL				50.65
	Add 1 % for water charges ,				0.51
	TOTAL				51.16
	Add 15 % for contractor's profit and overheads				7.67
	Cost for 1 metre				58.83
	Cost for 1 metre				58.83
	Say				58.85

21.9 Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.

21.9.1 For fixed portion

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 41.09 kg				
7391	Anodising 25 microns on aluminium sections	Kilogram	41.09	40.00	1643.60
7389	Anodising 15 microns on aluminium sections	Kilogram	41.09	32.00	(-)1314.88
	Difference				328.72
	Add 1 % for water charges				3.29
	TOTAL				332.01
	Add 15% for contractor's profit and overheads				49.80
	Cost for 41.09 kg				381.81
	Cost for 1 kg				9.29
	Say				9.30

21.9 Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.

21.9.2 For shutters of doors, windows & ventilators.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 21.65 kg				
7391	Anodising 25 microns on aluminium sections	kilogram	21.65	40.00	866.00
7389	Anodising 15 microns on aluminium sections	kilogram	21.65	32.00	(-)692.80
	Difference				173.20
	Add 1% for water charges				1.73
	TOTAL				174.93
	Add 15% for contractor's profit and overheads				26.24
	Cost for 21.65kg				201.17
	Cost for 1 kg				9.29
	Say				9.30

21.10 Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side having 12 mm air gap including providing EPDM gasket, perforated aluminium spacers, desiccants, silicon sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 sqm MATERIAL Hermetically sealled double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap. = 1.00 sqm Add for wastage & breakage @ 10% = 0.10sqm Total =1.10sqm				
8648	Hermetically sealled double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap.	sqm	1.10	1980.00	2178.00
9999	Carriage of glass	L.S.	6.66	1.00	6.66
7390	Neoprene/EPDM rubber gasket	metre	6.00	22.00	132.00
	LABOUR:				

Code	Description	Unit	Quantity	Rate	Amount
0112	Glazier	Day	0.23	141.60	32.57
0114	Beldar	Day	0.46	135.25	62.22
9999	Sundries and carriage of gasket	L.S.	6.89	1.00	6.89
	TOTAL				2418.34
	Add 1% for water charges				24.18
	TOTAL				2442.52
	Add ra% for contractor's profit and overheads				366.38
	Cost for 1 sqm				2808.90
	Say				2808.90

21.11 Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.

21.11.1 205X19mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost sor 10 nos.				
	MATERIAL				
8649	Stainless steel (SS 304 grade) adjustable friction window stay. 205 x 19mm	each	10	145.60	1 456.00
8647	Stainless steal screws 30mm x4mm.	cent	0.40	25.00	10.00
9999	Carriage	L.S.	2.73	1.00	2.73
	LABOUR:				
0112	Carpenter 2nd class	Day	0.14	141.60	19.82
0114	Beldar	Day	0.14	135.25	18.94
	TOTAL				1507.49
	Add 1 % for water charges				15.07
	TOTAL				1522.56
	Add15% for contractor's profit and overheads				228.38
	Cost for 10 nos				1750.94
	Cost for each				175.09
	Say				175.10

21.11 Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.

21.11.2 255X19mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost sor 10 nos.				
	MATERIAL				
8650	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19mm	each	10.00	161.20	1612.00
8647	Stainless steal screws 30mm x4mm.	cent	0.40	25.00	10.00
9999	Carriage	L.S.	2.73	1.00	2.73
	LABOUR:				
0112	Carpenter 2nd class	Day	0.14	141.60	19.82
0114	Beldar	Day	0.14	135.25	18.94
	TOTAL				1663.49
	Add 1 % for water charges				16.63
	TOTAL				1680.12
	Add 15% for contractor's profit and overheads				252.02
	Cost for 10 nos				1932.14
	Cost for each				193.21
	Say				193.20

21.11 Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete. ,

21.11.3 355X19 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost sor 10 nos.				
	MATERIAL				
8651	Stainless steel (SS 304 grade) adjustable friction window stay. 355 x 19mm	each	10.00	208.00	2080.00
8647	Stainless steal screws 30mm x4mm.	cent	0.40	25.00	10.00
9999	Carriage	L.S.	2.73	1.00	2.73
	LABOUR:				
0112	Carpenter 2nd class	Day	0.14	141.60	19.82
0114	Beldar	Day	0.14	135.25	18.94
	TOTAL				2 131.49
	Add 1 % for water charges				21.31
	TOTAL-				2 152.80
	Add 15% for contractor's profit and overheads				322.92
	Cost for 10 nos				2 475.72
	Cost for each				247.57
	Say				247.55

21.11 Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.

21.11.4 510X19mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	MATERIAL				
8652	Stainless steel (SS 304 grade) adjustable friction window stay. 510x19mm	each	10	390.00	3900.00
8647	Stainless steal screws 30mm x4mm.	cent	0.40	25.00	10.00
9999	Carriage	L.S.	2.73	1.00	2.73
	LABOUR:				
0112	Carpenter 2nd class	Day	0.14	141.60	19.82
0114	Beldar	Day	0.14	135.25	18.94
	TOTAL				3 951.49
	Add 1 % for water charges				39.51
	TOTAL-				3 991.00
	Add15% for contractor's profit and overheads				598.65
	Cost for 10 nos				4 589.65
	Cost for each				458.97
	Say				458.95

21.11 Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.

21.11.5 710X19mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos.				
	MATERIAL				
8653	Stainless steel (SS 304 grade) adjustable friction window stay. 710 x 19mm	each	10	715.00	7 150.00
8647	Stainless steel screws 30mm x4mm.	cent	0.40	25.00	10.00
9999	Carriage	L.S.	2.73	1.00	2.73
	LABOUR:				
0112	Carpenter 2nd class	Day	0.14	141.60	19.82
0114	Beldar	Day	0.14	135.25	18.94
	TOTAL				7 201.49
	Add 1% for water charges				72.01
	TOTAL				7 273.50
	Add 15% for contractor's profit and overheads				1 091.03
	Cost for 10 nos				8 364.53
	Cost for each				836.45
	Say				836.45

21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.

21.12.1 Anodized (AC 15) aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos handle bar.				
	Materials				
	10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum				
	0.0057 cum @ 2710 kg/ cum = 15.56kg				
	Add 5% wastage 0.78 kg				
	Total 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	195.00	3186.30
7389	Anodising 15 microns on aluminium sections	kilogram	16.34	32.00	522.88
9999	Carriage of material	L.S.	4.42	1.00	4.42
8647	Stainless steal screws 30mm x4mm.	cent	0.08	25.00	2.00
	Labour				
0111	Carpenter 1st class.	Day	0.125	151.50	18.94
	Total				3734.54
	Add 1% water charges				37.35
	Total				3771.89
	Add 15% contractor profit and overheads				565.78
	Cost of 10 nos				4337.67
	Cost of 1 no				433.77
	Say				433.75

21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS scrwes etc .complete as per direction of Engineer-in-Charge.

21.12.2 Powder coated minimum thickness 50 micron aluminium tubular handle bar.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos handle bar.				
	Materials				
	10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 cum				

Code	Description	Unit	Quantity	Rate	Amount
	0.0057 cum @ 2710 kg/ cum = 15.56kg Add 5% wastage = 0.78 kg Total = 16.34 kg				
7306	Aluminium T or L sections	kilogram	16.34	195.00	3186.30
7392	Epoxy powder coating 50 micron on aluminium sections.	kilogram	16.34	45.00	735.30
9999	Carriage of material	L.S.	4.42	1.00	4.42
8647	Stainless steal screws 30mm x4mm.	cent	0.08	25.00	2.00
	Labour				
0111	Carpenter 1 st class	Day	0.125	151.50	18.94
	Total				3946.96
	Add 1% water charges				39.47
	Total				3986.43
	AddJ15% contractor profit and overheads				597.96
	Cost of 10 nos				4584.39
	Cost of 1 no				458.44
	Say				458.45

21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.

21.12.3 Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 nos handle bar. Materials 10x22/7 x 1/4 (0.032x0.032 - 0.026 x 0.026) x 2.10 = 0.0057 0.0057 cum @ 2710 kg/cum = 15.56kg Add 5% wastage = 0.78 kg Total =16.34 kg				
7306	Aluminium T or L sections	Kilogram	16.34	195.00	3186.30
7393	Polyester powder coating 50 microns on aluminium sections	Kilogram	16.34	50.00	817.00
9999	Carriage of material	L.S.	4.42	1.00	4.42
8647	Stainless steal screws 30mm x4mm.	cent	0.08	25.00	2.00
	Labour				
0111	Carpenter 1 st class	Day	0.125	151.50	18.94
	Total				4028.66
	Add 1 % water charges				40.29
	Total				4068.95
	Add 15% contractor profit and overheads				610.34
	Cost of 10 nos				4679.29
	Cost of 1 no				467.93
	Say				467.95

21.13 Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 1 nos. Materials				
7001	Brass 100 mm mortice latch and lock with6 levers without pair of handles	each	1.00	150.00	150.00

Code	Description	Unit	Quantity	Rate	Amount
	Labour				
0111	Carpenter 1 st class	Day	0.17	151.50	25.76
9999	Sundry and screws	L.S.	3.64	1.00	3.64
	Total				179.40
	Add for water charges @ 1 %				1.79
	Total				181.19
	Add for contractor's profit and overhead @ 15%				27.18
	Cost of 1 no				208.37
	Say				208.35

21.14 Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS : 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with rawl plugs and stainless steel screws etc.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 4.082kg				
	MATERIAL : Aluminium Section				
	(i) External member of the frame (Jindal section no TU/ 3644)				
	V = 2x2.00 = 4.00 m				
	H = 2x1.20 = 2.40 m				
	= 6.40 m @ 0.607 kg/m = 3.885kg				
	Angle cleat 38x38x4.8 mm 50 mm long				
	4x0.05 = 0.200 m @ 0.985 kg/m = 0.197 kg				
	sub total = 4.082kg.				
	Add 5% wastage = 0.204kg				
7306	Total = 4.276kg	kilogram	4.286	195.00	835.77
0589	C.P. brass /stainless steel screws 20 mm for cleat angle.	100 Nos	8.00	63.00	5.04
7019	Dash hold fastners	each	8.00	8.00	64.00
7389	Anodising	kilogram	4.286	32.00	137.15
9999	Carriage of material	L.S.	5.20	1.00	5.20
	LABOUR				
	For fabrication of frame				
0116	Fitter	Day	0.04	151.50	6.06
0139	Beldar (Special)	Day	0.04	138.45	5.54
0114	Beldar	Day	0.02	135.25	2.70
0100	Bandhani	Day	0.01	138.45	1.38
9999	Labour for drilling holes, hire charges of drill, electricity charges, carriage of dash hold fastners & sundries	L.S.	5.20	1.00	5.20
	TOTAL				1068.04
	Add 1 % for water charges				10.68
	TOTAL				1078.72
	Add 15% for contractor's profit and overheads				161.81
	Cost for 4.082 kg				1240.53
	Cost for 1 kg				303.90
	Say				303.90

21.15 Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.

21.15.1 Anodized(AC 15) aluminium

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 nos.				
	Materials				
8660	Aluminium casement window fastner (Anodised AC 15)	each	10.00	30.00	300.00
8666	Stainless steel screws 25mm x4mm	cent	0.40	21.00	8.40
	Labour				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Total				320.22
	Add for water charges @ 1%				3.20
	Total				323.42
	Add for contractor's profit and overhead @ 15%				48.51
	Cost of 10 nos				371.93
	Cost of 1 nos				37.19
	Say				37.20

21.15 Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.

21.15.2 Powder coated minimum thickness 50 micron aluminium.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 nos.				
	Materials				
8661	Aluminium casement window fastner (powder coated).	each	10.00	33.00	330.00
8666	Stainless steel screws 25mm x4mm	cent	0.40	21.00	8.40
	Labour				
111	Carpenter 1 st class	Day	0.06	151.50	9.09
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Total				350.22
	Add for water charges @ 1%				3.50
	Total				353.72
	Add for contractor's profit and overhead @ 15%				53.06
	Cost of 10 nos				406.78
	Cost of 1 nos				40.68
	Say				40.70

21.15 Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.

21.15.3 Polyester powder coated minimum thickness 50 micron aluminium .

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 nos.				
	Materials				
8662	Aluminium casement window fastner (polyester powder coated).	each	10.00	35.00	350.00
8666	Stainless steel screws 25mm x4mm	cent	0.4	21.00	8.40
	Labour				

Code	Description	Unit	Quantity	Rate	Amount
111	Carpenter 1st class	Day	0.06	151.50	9.09
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Total				370.22
	Add for water charges @ 1 %				3.70
	Total				373.92
	for contractor's profit and overhead @ 15%				56.09
	Cost of 10 nos				430.01
	Cost of 1 nos				43.00
	Say				43.00

21.16 Providing and fixing aluminium round shape handle of outer dia 100mm with SS screws etc. Complete as per direction of Engineer-in-charge

21.16.1 Anodized (AC 15) aluminium

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 nos.				
	Materials				
8663	Aluminium round shape handle (anodised AC 15)	each	10.00	37.00	370.00
8666	Stainless steel screws 25mm x4mm	cent	0.40	21.00	8.40
	Labour				
0111	Carpenter 1 st class	Day	0.06	151.50	9.09
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Total				390.22
	Add for water charges @ 1 %				3.90
	Total				394.12
	Add for contractor's profit and overhead @ 15 %				59.12
	Cost of 10 nos				453.24
	Cost of 1 nos				45.32
	Say				45.30

21.16 Providing and fixing aluminium round shape handle of outer dia 100mm with SS screws etc. Complete as per direction of Engineer-in-charge.

21.16.2 Powder coated minimum thickness 50 micron aluminium.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 nos.				
	Materials				
8664	Aluminium round shape handle (powder coated)	each	10.00	41.00	410.00
8666	Stainless steel screws 25mm x4mm	cent	0.40	21.00	8.40
	Labour				
0111	Carpenter 1 st class	Day	0.06	151.50	9.09
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Total				430.22
	Add for water charges @ 1 %				4.30
	Total				434.52
	Add for contractor's profit and overhead @ 15%				65.18
	Cost of 10 nos				499.70
	Cost of 1 nos				49.97
	Say				49.95

21.16 Providing and fixing aluminium round shape handle of outer dia 100mm with SS screws etc. Complete as per direction of Engineer-in-charge.

21.16.3 Polyester powder coated minimum thickness 50 micron aluminium .

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 nos.				
	Materials				
8665	Aluminium round shape handle (polyester powder coated).	each	10.00	43.00	430.00
8666	Stainless steel screws 25mm x4mm	cent	0.40	21.00	8.40
	Labour				
0111	Carpenter 1st class	Day	0.06	151.50	9.09
9999	Carriage of materials	L.S.	2.73	1.00	2.73
	Total				450.22
	Add for water charges @ 1%				4.50
	Total				454.72
	Add for contractor's profit and overhead @ 15%				68.21
	Cost of 10 nos				522.93
	Cost of 1 nos				52.29
	Say				52.30

SUB HEAD : 22.0

WATER PROOFING

22.1 Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : (i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound . ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.

22.1.1 Using rough kota stone.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.00 sqm				
	MATERIAL				
	Ist layer				
	Cement mortar 1:3 for fixing of stone 10 x 0.025 = 0.25	cum	0.25	3169.60	792.40
	(Rate as per item no. 3.8)				
1169	Kota stone slab = 10 sqm				
	Wastage @ 10% = 1sqm				
	Total = 11 sqm	sqm	11.00	150.00	1650.00
2216	Cartage 11x0.025 @2330 kg/m^3 = 0.64 t	tonne	0.64	47.29	30.27
	Cement mortar 1:3				
	10x0.025 = 0.25 cum				
	Wastage @ 12% = 0.03 cum				
	Total = 0.28 cum(Rate as per item no.3.8)	cum	0.28	3169.60	887.49
	Cement for slurry				
	Bed				
	2x10.00 @ 2kg/m^3 = 40.00 kg				
	Joints				
	4x3.7x0.02x0.037 = 0.011 cum				
	25x0.6x0.02x0.037 = 0.011 cum				
	= 0.022 cum @ 1440 kg/cum =31.68 kg				
0367	Total = 71.88 kg or 0. 72 t	tonne	0.072	4500.00	324.00
2209	Carriage of cement	tonne	0.072	47.29	3.40
	Water proofing material				
	Mortar = 0.25 + 0.28 = 0.53 cum				
	Cement in 0.53 cum @ 5.1 q/cum = 2.7 quintal				
	Cement in slurry = 0.73 quintal				
	= 3.43 quintal @ 1 kg for 50 kg of cement				
1213	i.e. 6.86 kg	kilogram	6.86	20.00	137.20
	12 mm stone grit @ 8 cudm/sqm				
0296	1x10.3x8x1/1000 = 0.08 cum	cum	0.08	700.00	56.00
2202	Carriage	cum	0.08	53.21	4.26
	Labour for base mortar & kota stone laying				
	i/c slurry job				
0125	Mason 2nd class	Day	1.20	141.60	169.92
0114	Beldar	Day	1.00	135.25	135.25
0115	Coolie	Day	1.00	135.25	135.25
	Labour for top layer & spreading stone grit				

Code	Description	Unit	Quantity	Rate	Amount
0125	Mason 2nd class	Day	1.08	141.60	152.93
0114	Beldar	Day	1.08	135.25	146.07
0101	Bhisti	Day	0.45	138.45	62.30
9999	Sundries	L.S	6.24	1.00	6.24
	TOTAL				4692.98
	Add 1% for water charges				46.93
	TOTAL				4739.91
	Add 15% for contractor's profit and overheads				710.99
	Cost for 10.00 sqm				5450.90
	Cost for 1 sqm				545.09
	Say				545.10

22.2 Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exjerior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :

22.2.1 Using rough Kota stone

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for10.00sqm. MATERIAL 1st layer Kota stone slab = 10 sqm Wastage 10% = 1 sqm				
1169	Total = 11 sqm	sqm	11.00	150.00	1650.00
2216	Cartage 11x0.025 @ 2330 kg/m^3 = 0.64t	tonne	0.64	47.29	30.27
	Cement slurry for jointing 6x3.70 = 22.20 m 7x2.78= 19.46 m =41.66x0.025x0.012 = 0.013 cum Cement slurry for filling 20 mm gap 10x0.02 = 0.200 cum				
0367	= 0.213 cum @ 1440 kg/cum = 306.70 kg or 0.307 t	tonne	0.31	4500.00	1395.00
2209	Carriage	tonne	0.31	47.29	14.66
(A)	Cement plaster 1:3 with neat cement punning) (Rate as per item no. 13.9.2)	sqm	10.00	154.00	1540.00
	Water proofing material Cement slurry = 0.31 t = 310 kg Cement plaster 1:3 @ 13.62 q/100sqm = 136.20 kg				
1213	Total = 446.20 kg @ 1 kg for 50 kg of cement i.e. 8.90 kg	kilogram	8.90	20.00	178.00
	LABOUR Fixing of Kota stone and applying cement & applying slurry.				

Code	Description	Unit	Quantity	Rate	Amount
0124	Mason 2nd class	Day	3.00	141.60	424.80
0114	Beldar	Day	3.00	135.25	405.75
0115	Coolie	Day	1.00	135.25	135.25
9999	Sundries and scaffolding	L.S	18.20	1.00	18.20
	TOTAL				5791.93
	Add 1% for water charges except on (A)				42.52
	TOTAL				5834.45
	Add 15% for contractor's profit and overheads except on (A)				644.17
	Cost for 10.00sqm				6478.62
	Cost for 1 sqm				647.86
	Say				647.85

22.3 Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of :

(i) 1st course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.

(ii) IInd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.

(iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area.

(iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIAL				
0367	Cement slurry @ 4.4 kg/sqm = 44.00 kg or 0.044 t	tonne	0.044	4500.00	198.00
2209	Carriage	tonne	0.044	47.29	2.08
	Cement plaster 1:3 (20 mm thick)				
	Materials :				
	Cement mortar1:3 (Rate as per items no.3.8)	cum	0.224	3169.60	709.99
	Labour				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.25	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scafolding and sundries	L.S	12.61	1.00	12.61
	Bitumen blown or/and residual bitumen				
0313	= 10x1.70= 17 kg = 0.017 t	tonne	0.017	25000.00	425.00
2211	Carriage	tonne	0.017	53.21	0.90
3002	PVC 400 micron thick sheet	sqm	10.00	26.00	260.00
9999	Carriage	L.S	13.00	1.00	13.00
	Water proofing compound @ 1 kg per 50 kg of cement used				
	Cement slurry = 44 kg				
	Cement plaster 1:3				
	10x(13.62xl00)/100= 136.2 kg				
1213	Total = 180.2 kg/50 = 3.60 kg	kilogram	3.60	20.00	72.00
	LABOUR				
0131	Painter	Day	0.20	141.60	28.32

Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	1.33	135.25	179.88
0130	Mistry	Day	0.06	151.50	9.09
9999	Sundries	L.S	7.28	1.00	7.28
	TOTAL				2346.17
	Add 1% for water charges				23.46
	TOTAL				2369.63
	Add 15% for contractor's profit and overheads				355.44
	Cost for 10 sqm				2725.07
	Cost for 1 sqm				272.51
	Say				272.50

22.4 Providing and Placing in position suitable PVC water stops conforming to IS: 12200 for construction/expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :

22.4.1 Serrated with central bulb (225mm wide, 8-11mm thick).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
7427	Water stop serreted with bulb	metre	100.00	330.00	33 000.00
	Labour				
0114	Beldar	Day	2.00	135.25	270.50
9999	Sundries & wire etc.	L.S	26.00	1.00	26.00
	TOTAL				33 296.50
	Add 1% for water charges				332.96
	TOTAL				33 629.46
	Add 15% for contractor's profit and overheads				5 044.42
	Cost for 100 metres				38 673.88
	Cost for 1 metre				386.74
	Say				386.75

22.4 Providing and Placing in position suitable PVC water stops conforming to IS: 12200 for construction/expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :

22.4.2 Dumb bell with central bulb (180 mm wide, 8 mm thick)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
7428	Dumb bell with central bulb (180 mm wide, 8 mm thick)	metre	100.00	306.00	30 600.00
	Labour				
0114	Beldar	Day	2.00	135.25	270.50
9999	Sundries & wire etc.	L.S	26.00	1.00	26.00
	TOTAL				30 896.50
	Add 1% for water charges				308.97
	TOTAL-				31 205.47
	Add 15% for contractor's profit and overheads				4 680.82
	Cost for 100 metres				35 886.29
	Cost for 1 metre				358.86
	Say				358.85

22.4 Providing and Placing in position suitable PVC water stops conforming to IS: 12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :

22.4.3 Kickers (320mm wide, 5mm thick).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 metres				
	MATERIAL				
7429	Kickers (320 mm wide, 5 mm thick)	metre	100.00	325.00	32500.00
	Labour				
0114	Beldar	Day	2.00	135.25	270.50
9999	Sundries & wire etc.	L.S	26.00	1.00	26.00
	TOTAL				32 796.50
	Add 1 % for water charges				327.96
	TOTAL				33 124.46
	Add 15% for contractor's profit and overheads				4 968.67
	Cost for 100 metres				38 093.13
	Cost for 1 metre				380.93
	Say				380.95

22.5 Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :

(a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours

(b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm.
This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.
The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm			.	
	MATERIAL				
	Cement 10x(0.488 + 0.242) = 7.30 kg				
	Sealing fillets10 x 0.5 kg =5.00kg				
0367	Total = 12.30 kg = 0.012 tonne	tonne	0.012	4500.00	54.00
2209	Carriage of Cement	tonne	0.012	47.29	0.57
	Bonding material 1.6 kgx30x2 = 96 kg				
	Bitumen (blown/residual type)				
	10x(0.25+0.126) = 3.79kg				
	Sealing fillets 10x0.10 kg / sqm = 1.00 kg				
	Wastage @ 5% on 4.79 kg = 0.24 kg				
8501	Total = 5.03 kg Say 5.00 kg	kilogram	5.00	114.00	570.00
	LABOUR				
0155	Mason (average)	Day	2.00	146.55	293.10
0114	Beldar	Day	2.00	135.25	270.50
0101	Bhisti	Day	0.25	138.45	34.61
9999	Sundries, brushes etc	L.S	15.60	1.00	15.60
	TOTAL				1 238.38
	Add 1% for water charges				12.38
	TOTAL				1 250.76
	Add 15% for contractor's profit and overheads				187.61
	Cost for 10 sqm				1 438.37
	Cost for 1 sqm				143.84
	Say				143.85

22.6 Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying :

(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.

(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.

(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around.

(d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately For the purpose of measurement the entire treated surface will be measured.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	MATERIAL				
	Cement 10x (1.289 + 0.488) = 17.77 kg				
	Sealing fillets @ 10% = 1.77 kg				
0367	Total = 19.54kg = 0.020 tonne	tonne	0.02	4500.00	90.00
2209	Carriage of Cement	tonne	0.02	47.29	0.95
	Bonding material 1.6 kgx30x2 = 96 kg				
	Bitumen (blown/residual type)				
	10x(0.253+0.67) = 9.23kg				
	Wastage 5% = 0.46 kg				
8501	Total = 9.69 kg	kilogram	9.69	114.00	1 104.66
	Fibre Glass cloth = 10.00 sqm				
	Wastage 10 % - 1.00 sqm				
8502	Total = 11.00 sqm	sqm	11.00	33.00	363.00
	LABOUR				
0155	Mason (average)	Day	2.00	146.55	293.10
0114	Beldar	Day	1.00	135.25	135.25
0101	Bhisti	Day	0.25	138.45	34.61
9999	Sundries, brushes etc	L.S	23.40	1.00	23.40
	TOTAL				2044.97
	Add 1% for water charges				20.45
	TOTAL-				2065.42
	Add15% for contractor's profit and overheads				309.81
	Cost for 10 sqm				2375.23
	Cost for 1 sqm				237.52
	Say				237.50

22.7 Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:

(a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.

(b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand)

admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs

(c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.

(d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.

(e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :

22.7.1 With average thickness of 120mm and minimum thickness at khurra as 65 mm.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	i) Cement slurry				
0367	Cement	tonne	0.0275	4 500.00	123.75
	ii) Cement mortar 1:5 (1 cement: 5 coarse sand) (Rate as per item no.3.10)	cum	0.224	2 260.15	506.27
	iii) Roof treatment with brick bats and cement mortar				
	Materials:				
0285	Brick bats/ brick aggregate	cum	0.94	350.00	329.00
2260	Carriage	cum	0.94	57.83	54.36
	Cement mortar 1:5 (Rate as per item no.3.10)	cum	0.50	2 260.15	1 130.08
	Labour				
0114	Beldar	Day	1.75	135.25	236.69
0101	Bhishti	Day	0.28	138.45	38.77
0123	Mason 1 st class	Day	0.05	151.50	7.58
0124	Mason 2nd class	Day	0.05	141.60	7.08
0128	Mate	Day	0.04	138.45	5.54
	Extra labour for ramming				
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S	13.65	1.00	13.65
	iv) Cement slury				
0367	Cement	tonne	0.0275	4 500.00	123.75
0114	Beldar	Day	0.20	135.25	27.05
	v) 20 mm cement plaster 1:4(1 cement: 4 coarse sand)				
(A)	(Rate as per item no 13.6.1 of SH : Finishing)	sqm	10.00	118.25	1182.50
	vi) Water proofing compound				
1213	27.50+27.50+69.40+124.00 = 248.40 kg @ 1 kg per bag of cement	kilogram	5.00	20.00	100.00
	Extra for making chequers for 10 sqm				
7233	Fibre glass tissue reinforcement Type IIGrade I	sqm	10.50	55.00	577.50
	Mason 2nd class				
0124	Beldar	Day	0.36	141.60	50.98
0114	Chequer plate	Day	0.36	135.25	48.69
9999	Add labour for laying 20 mm bed mortar	L.S.	13.65	1.00	13.65
	Mason 2nd class				

Code	Description	Unit	Quantity	Rate	Amount
0124	Beldar	Day	0.54	141.60	76.46
0114	Bhishti	Day	0.54	135.25	73.04
0101	TOTAL	Day	0.45	138.45	62.30
	Add for water charges @ 1% on all except 'A'				4822.50
	TOTAL				36.44
	Add for contractor's profit and overheads @				4858.90
	15% on all except 'A'				551.46
	Cost for 10 sqm				
	Cost for one sqm				5410.36
	Say				541.04
					541.05

22.8 Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (Hessian based self finished bitumen" felt) and fourth and final course of stone grit 6mm and down size or pea-sized gravel spread at 6 cubic diameter per square metre including preparation of surface but excluding grading complete with :

22.8.1 Bitumen felt (Hessian base) type 3 grade I conforming to IS : 1322.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 sqm				
0313	Blown or / and residual bitumen applied hot = 2x1.45x30 = 87 kg	tonne	0.087	25000.00	2175.00
	Hession felt type 3 Grade I (hessian base self finished bitumen felt) = 30 sqm				
	Add for over lapping @ 10% = 3 sqm.				
0322	Total = 33 Sqm.	sqm	33.00	45.00	1485.00
1177	Stone grit 6mm and down size or pea sized gravel. 30x6=180 cudm.	cum	0.18	717.00	129.06
2202	Carriage of stone grit	cum	0.18	53.21	9.58
2211	Carriage of bitumen and felt. = 0.162t 0.087t+2.7x.001x33=0.162t	tonne	0.162	53.21	8.62
0370	Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.087=0.174q	quintal	0.174	300.00	52.20
2200	Carriage of fuel	tonne	0.0174	60.81	1.06
9999	Praparing roof surface, sutting groove and making good etc.	L.S	134.55	1.00	134.55
	Labour:				
0131	Painter	Day	2.16	141.60	305.86
0114	Beldar	Day	3.24	135.25	438.21
0130	Mistries	Day	0.18	151.50	27.27
9999	Sundries, brushes etc.	L.S	6.76	1.00	6.76
	TOTAL				4 773.17
	Add 1% for water charges				47.73
	TOTAL				4 820.90
	Add 15% for contractor's profit and overheads				723.14
	Cost of 30.00 Sqm.				5 544.04
	Cost of 1.00 Sqm.				184.80
	Say				184.80

22.9 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) conforming to IS : 1322 and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 sqm				
	Blown or / and residual bitumen applied hot (1.45+1.20+1.45)x30				
0313	123 Kg.	tonne	0.123	25000.00	3 075.00
	Bitumen felt type 3 grade I (hession base self finished bitumen felt) = 60 sqm.+				
	Add for over lapping @ 10% = 6 sqm.				
0322	=66 Sqm.	sqm	66.00	45.00	2 970.00
2211	Carriage of bitumen and felt. =0.273t.				
	0.123t+2.7x.001x66=0.273t	tonne	0.273	53.21	14.53
1177	Stone grit 6mm and sown size or pea sized gravel 30x6=180cudm.	cum	0.18	717.00	129.06
2202	Carriage of stone grit	cum	0.18	53.21	9.58
0370	Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.123=0.246q	quintal	0.246	300.00	73.80
2200	Carriage of fuel	tonne	0.0246	60.81	1.50
9999	Praparing roof surface, sutting groove and making good etc.	L.S	134.55	1.00	134.55
	Labour:				
0131	Painter	Day	3.24	141.60	458.78
0114	Beldar	Day	4.86	135.25	657.32
0130	Mistries	Day	0.20	151.50	30.30
9999	Sundries, brushes etc.	L.S	6.76	1.00	6.76
	TOTAL				7 561.18
	Add 1% for water charges				75.61
	TOTAL				7636.79
	Add 15% for contractor's profit and overheads				1 145.52
	Cost of 30.00 Sqm.				8782.31
	Cost of 1.00 Sqm.				292.74
	Say				292.75

22.10 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitufnen felt) six and final courses of stone grit 6mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading compete.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 sqm				
	Blown bitumen applied hot (1.45+1.20+1.70)x30				
0313	130.5 Kg.	tonne	0.1305	25000.00	3262.50
	Bitumen felt type B grade I (fibre base self finished bitumen felt) = 60 sqm.				

Code	Description	Unit	Quantity	Rate	Amount
	Add for over lapping @ 10% = 6 sqm.				
0318	Total =66 Sqm.	sqm	66.00	45.00	2 970.00
2211	Carriage of bitumen and felt.				
	(0.131 t+2.22x.001x66 = 0.275t)	tonne	0.275	53.21	14.63
1177	Stone grit 6mm and sown size or pea sized ravel. 30x6=180cudm.	cum	0.18	717.00	129.06
2202	Carriage of stone grit	cum	0.18	53.21	9.58
0370	Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.1305=0.261q	quintal	0.261	300.00	78.30
2200	Carriage of fuel	tonne	0.0261	60.81	1.59
9999	Preparing roof surface, sutting groove and making good etc.	L.S	134.55	1.00	134.55
	Labour:				
0131	Painter	Day	4.32	141.60	611.71
0114	Beldar	Day	6.48	135.25	876.42
0130	Mistries	Day	0.36	151.50	54.54
9999	Sundries, brushes etc.	L.S	6.76	1.00	6.76
	TOTAL				8149.64
	Add 1% for water charges				81.49
	TOTAL				8231.13
	Add 15% for contractor's profit and overheads				1234.67
	Cost of 30.00 Sqm.				9465.80
	Cost of 1.00 Sqm.				315.53
	Say				315.55

22.11 Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade II (glass fibre base self finished bitumen felt) and sixth and final course of stone grit 6mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 sqm				
0313	Blown or / and residual bitumen applied hot (1.45+1.20+1.70)x30 =130.5 Kg.	tonne	0.1305	25000.00	3262.50
0318	Bitumen felt type 2 grade II (fibre base self finished bitumen felt) = 60 sqm.+ Add for over lapping @ 10% = 6 sqm. =66 Sqm.	sqm	66.00	45.00	2 970.00
2211	Carriage of bitumen and felt. (0.131t+3.08x.001x66=334t.)	tonne	0.334	53.21	17.77
1177	Stone grit 6mm and down size or pea sized ravel. 30x6=180cudm.	cum	0.18	717.00	129.06
2202	Carriage of stone grit	cum	0.18	53.21	9.58
0370	Fuel (Steam coal) = 2 quintals/t of bitumen i.e. 2x0.1305=0.261q	quintal	0.261	300.00	78.30

Code	Description	Unit	Quantity	Rate	Amount
2200	Carriage of fuel	tonne	0.0261	60.81	1.59
9999	Preparing roof surface, sutting groove and making good etc.	L.S	134.55	1.00	134.55
	Labour:				
0131	Painter	Day	4.32	141.60	611.71
0114	Beldar	Day	6.48	135.25	876.42
0130	Mistries	Day	0.36	151.50	54.54
9999	Sundries, brushes etc.	L.S	6.76	1.00	6.76
	TOTAL				8152.78
	Add 1% for water charges				81.53
	TOTAL				8234.31
	Add 15% for contractor's profit and overheads				1235.15
	Cost of 30.00 Sqm.				9469.46
	Cost of 1.00 Sqm.				315.65
	Say				315.65

22.12 Supplying and applying bituminous solution primer on roof and or wall surface at 0.24 litre per sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sq. metres				
	Materials				
0316	Bitumenous solution primer	litre	2.40	28.00	67.20
9999	Carriage	L.S	1.43	1.00	1.43
	Labour:				
0131	Painter	Day	0.17	141.60	24.07
0114	Beldar	Day	0.17	135.25	22.99
9999	Sundries brushes etc	L.S	13.52	1.00	13.52
	TOTAL				129.21
	Add 1 % for water charges				1.29
	TOTAL				130.50
	Add 15% for contractor's profit and overheads				19.58
	Cost of 10.00 sqm				150.08
	Cost of 1 Cum.				15.01
	Say				15.00

22.13 Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm or down size or pea sized gravel:

22.13.1 At 6 cudm per sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Materials:				
1177	Stone grit 6mm or down size 6x10 = 60 cudm.	cum	0.06	717.00	43.02
2202	Carriage of stone grit	cum	0.06	53.21	3.19
9999	Labour for screening and spreading grit	L.S.	21.58	1.00	21.58
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				74.55
	Add 1% for water charges				0.75
	TOTAL				75.30
	Add 15% for contractor's profit and overheads				11.30
	Cost of 10.00 Sqm.				86.60
	Cost of 1.00 Sqm.				8.66
	Say				8.65

22.13 Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm down size or pea sized gravel:

22.13.2 At 8 cudm per sqm.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Materials:				
1177	Stone grit 6mm or down size 6x10 = 60 cudm.	cum	0.08	717.00	57.36
2202	Carriage of stone grit	cum	0.08	53.21	4.26
9999	Labour for screening and spreading grit	L.S.	26.91	1.00	26.91
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				95.29
	Add 1% for water charges				0.95
	TOTAL				96.24
	Add 15% for contractor's profit and overheads				14.44
	Cost 10.00 Sqm.				110.68
	Cost of 1.00 Sqm.				11.07
	Say				11.05

22.14 Grading roof for water proofing treatment with

22.14.1 Cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 20mm nominal size)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cum.				
0295	Stone aggregate 20mm nominal size	cum	0.67	700.00	469.00
0297	Stone aggregate 10mm nominal size	cum	0.22	700.00	154.00
2202	Carriage of stone aggregate	cum	0.89	53.21	47.36
0982	Coarse sand	cum	0.45	600.00	270.00
2203	Carriage of coarse sand	cum	0.45	53.21	23.94
0367	Cement	tonne	0.32	4500.00	1440.00
2209	Carriage of cement	tonne	0.32	47.29	15.13
	Labour:-				
0114	Beldar	Day	1.63	135.25	220.46
0101	Bhishti	Day	0.70	138.45	96.92
0123	Mason 1st Class	Day	0.10	151.50	15.15

Code	Description	Unit	Quantity	Rate	Amount
9999	Sundries, brushes etc.	L.S.	14.30	1.00	14.30
0002	Mixer	Day	0.07	400.00	28.00
0012	Vibrator	Day	0.07	200.00	14.00
9999	Sundries for laying in terrace	L.S.	45.76	1.00	45.76
	TOTAL				2854.02
	Add 1 % for water charges				28.54
	TOTAL				2882.56
	Add 15% for contractor's profit and overheads				432.38
	Cost of one cum				3314.94
	Say				3314.95

22.14 Grading roof for water proofing treatment with
22.14.2 Cement mortar 1:3(1 cement: 3 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cum.				
	Materials:				
	Cement mortar 1:3 (Rate as per item no. 3.8)	cum	1.00	3169.60	3169.60
	Labour				
0155	Mason	Day	1.00	146.55	146.55
0114	Beldar	Day	2.00	135.25	270.50
0101	Bhishti	Day	0.50	138.45	69.22
0115	Coolie	Day	5.00	135.25	676.25
9999	Sundries	L.S.	11.70	1.00	11.70
	TOTAL				4343.82
	Add 1% for water charges				43.44
	TOTAL-				4387.26
	Add 15% for contractor's profit and overheads				658.09
	Cost of one cum				5045.35
	Say				5045.35

22.14 Grading roof for water proofing treatment with
22.14.3 Cement mortar 1:4 (lcement: 4 coarse sand)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cum.				
	Materials:				
	Cement mortar 1:4 (Rate as per item no. 3.9)	cum	1.00	2578.45	2578.45
	Labour				
0155	Mason	Day	1.00	146.55	146.55
0114	Beldar	Day	2.00	135.25	270.50
0101	Bhishti	Day	0.5	138.45	69.22
0115	Coolie	Day	5.00	135.25	676.25
9999	Sundries	L.S.	10.79	1.00	10.79
	TOTAL				3751.76
	Add 1 % for water charges				37.52
	TOTAL				3789.28
	Add 15% for contractor's profit and overheads				568.39
	Cost of one cum				4357.67
	Say				4357.65

22.15 Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric

membrane 1.5mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20micron HMHDPE film sandwitched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (lcement:3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement: 3 fine sand) and finished neat which shall be paid for separately as per DSR Item No. 12.19.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 sqm				
	MATERIAL				
	APP modified polymeric felt (two layers) 1.5 mm thick = 2x30 = 60 sqm				
	Add 10% wastage = 6 sqm				
8200	Total = 66 sqm	sqm	66.00	50.00	3300.00
0316	Bitumen primer 0.4x30 = 12	litre	12.00	28.00	336.00
0313	Bitumen (Blown/ residual type) 3x36 =108 kg = 0.108 tonne	tonne	0.108	25000.00	2700.00
2211	Carriage of bitumen primer	tonne	0.12	53.21	6.39
9999	Carriage of polymeric felt	L.S.	7.80	1.00	7.80
0370	Fuel (steam coal)	quintal	0.174	300.00	52.20
2200	Carriage of fuel	tonne	0.0174	60.81	1.06
9999	Preparing roof surface, cutting grooves and making good the same	L.S.	134.55	1.00	134.55
	LABOUR				
0131	Painter	Day	2.16	141.60	305.86
0114	Beldar	Day	3.24	135.25	438.21
0130	Mistry	Day	0.18	151.50	27.27
9999	Sundries, brushes etc	L.S.	6.76	1.00	6.76
	TOTAL				7316.10
	Add 1 % for water charges				73.16
	TOTAL				7389.26
	Add 15% for contractor's profit and overheads				1108.39
	Cost for 30 sqm				8497.65
	Cost for 1 sqm				283.26
	Say				283.25

22.16 Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as lOOmicron HMHDPE film sandwitched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement: 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately as per DSR Item No. 12.19.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 sqm				
	MATERIAL				
	APP modified polymeric felt (two layers) 2.0 mm thick =30 sqm				
8201	Total = 33 sqm	sqm	33.00	85.00	2 805.00
0316	Bitumen primer 0.4x30 = 12	litre	12.00	28.00	336.00
0313	Bitumen (Blown/ residual type) 1.20x30x2 =72 kg = 0.072 tonne	tonne	0.072	25 000.00	1 800.00
2211	Carriage of bitumen primer	tonne	0.084	53.21	4.47
9999	Carriage of polymeric felt	L.S.	7.80	1.00	7.80
0370	Fuel (steam coal)	quintal	0.174	300.00	52.20
2200	Carriage of fuel	tonne	0.0174	60.81	1.06
9999	Preparing roof surface, cutting grooves and making good the same	L.S.	134.55	1.00	134.55
	LABOUR				
0131	Painter	Day	1.58	141.60	223.73
0114	Beldar	Day	2.37	135.25	320.54
0130	Mistry	Day	0.13	151.50	19.70
9999	Sundries, brushes etc	L.S.	6.76	1.00	6.76
	TOTAL				5711.81
	Add 1 % for water charges				57.12
	TOTAL				5 768.93
	Add 15% for contractor's profit and overheads				865.34
	Cost for 30 sqm				6 634.27
	Cost for 1 sqm				221.14
	Say				221.15

22.17 Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 1 OOmicron HMHDPE film sandwitched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement: 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement: 3 fine sand) and finished neat which shall be paid for separately as per DSR Item No. 12.19.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 30 sqm				
	MATERIAL				
	APP modified polymeric felt (two layers) 2.0 mm thick = 3x30 = 60 sqm				
	Add 10% waistage = 6 sqm				
8201	Total = 66 sqm	sqm	66.00	85.00	5610.00
0316	Bitumen primer 0.4x30 = 12	litre	12.00	28.00	336.00
0313	Bitumen (Blown/ residual type) 3course x 36 = 108 kg = 0.108 tonne	tonne	0.108	25000.00	2700.00
2211	Carriage of bitumen primer	tonne	0.12	53.21	6.39
9999	Carriage of polymeric felt	L.S.	7.80	1.00	7.80
0370	Fuel (steam coal)	quintal	0.174	300.00	52.20

Code	Description	Unit	Quantity	Rate	Amount
2200	Carriage of fuel	tonne	0.0174	60.81	1.06
9999	Preparing roof surface, cutting grooves and making good the same	L.S.	134.55	1.00	134.55
	LABOUR				
0131	Painter	Day	2.16	141.60	305.86
0114	Beldar	Day	3.24	135.25	438.21
0130	Mistry	Day	0.18	151.50	27.27
9999	Sundries, brushes etc	L.S.	6.76	1.00	6.76
	TOTAL				9626.10
	Add 1% for water charges				96.26
	TOTAL				9722.36
	Add 15% for contractor's profit and overheads				1458.35
	Cost for 30 sqm				11180.71
	Cost for 1 sqm				372.69
	Say				372.70

22.18 Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2mm thick water proofing membrance, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/ sq. mt. by the same membrane manufacturer of density at 25°C, 0.87 - 0.89 kg/ ltr and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane.

22.18.1 2mm (for corrugated roof sheets)

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 sqm				
	MATERIALS :				
	A.P.P. modified 2 mm thick - 30 sqm				
	Add 10% for waistage = 3 sqm				
	Total = 33 sqm				
8203	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt	sqm	33.00	147.00	4 851.00
8206	Bitumen primer for bitumen membrane	litre	12.00	54.00	648.00
2211	Carriage of Tar bitumen	tonne	0.012	53.21	0.64
9999	Carriage of bitumen membrane	L.S.	7.80	1.00	7.80
1241	Fuel LPG	kg	7.00	35.00	245.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.00	49.53
	LABOUR:				
0159	Skilled torch operator for laying tack	Day	2.16	151.50	327.24
0130	Mistry	Day	0.18	151.50	27.27
0114	Beldar	Day	3.24	135.25	438.21
9999	Sundries, brushes, bitumen torch etc	L.S.	23.40	1.00	23.40
	TOTAL				6618.09
	Add 1% for water charges				66.18
	TOTAL				6684.27
	Add 15% for contractor's profit and overheads				1002.64
	Cost for 30 sqm				7686.91
	Cost for 1 sqm				256.23
	Say				256.25

22.19 Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/ sqm. by the same membrane manufacturer of density at 25°C, 0.87 - 0.89 kg/ltr and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane:

22.19.1 3 mm thick

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 sqm				
	MATERIALS :				
	A.P.P. modified 3mm thick =-*30* sqm				
	Add 10% for wastage 3 sqm. Total 33 sqm				
8204	A.P.P. modified 3 mm thick membrance reinforced with glass fibre matt	sqm	33.00	185.00	6 105.00
8206	Bitumen primer for bitumen membrance	litre	12.00	54.00	648.00
2211	Carriage of Tar bitumen	tonne	0.012	53.21	0.64
9999	Carriage of bitumen membrance	L.S.	7.80	1.00	7.80
1241	Fuel LPG	kg	7.00	35.00	245.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.00	49.53
49.53	LABOUR:				
0159	Skilled torch operator for laying tack	Day	2.16	151.50	327.24
0130	Mistry	Day	0.18	151.50	27.27
0114	Beldar	Day	3.24	135.25	438.21
9999	Sundries, brushes, bitumen torch etc	L.S.	23.40	1.00	23.40
	TOTAL				7872.09
	Add 1 % for water charges				78.72
	TOTAL				7950.81
	Add 15% for contractor's profit and overheads				1192.62
	Cost for 30 sqm				9143.43
	Cost for 1 sqm				304.78
	Say				304.80

22.20 Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufacturer of density at 25°C, 0.87-0.89 kg/ltr and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 650/450N/5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane.

22.20.1 3 mm thick

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 sqm				
	MATERIALS :				
	A.P.P. modified 3mm thick - 30 sqm				
	Add 10% for wastage = 3 sqm.				
	Total = 33 sqm				
8205	A.P.P. modified 3 mm thick membrance reinforced with polyster matt	sqm	33.00	221.00	7 293.00
8206	Bitumen primer for bitumen membrane	litre	12.00	54.00	648.00
2211	Carriage of Tar bitumen	tonne	0.012	53.21	0.64
9999	Carriage of bitumen membrane	L.S.	7.80	1.00	7.80
1241	Fuel LPG	kg	7.00	35.00	245.00
9999	Preparing roof surface, cutting grooves	L.S.	49.53	1.00	49.53
	LABOUR:				
0159	Skilled torch operator for laying tack	Day	2.16	151.50	327.24
0130	Mistry	Day	0.18	151.50	27.27
0114	Beldar	Day	3.24	135.25	438.21
9999	Sundries, brushes, bitumen torch etc	L.S.	23.40	1.00	23.40
	TOTAL				9060.09
	Add 1% for water charges				90.60
	TOTAL				9150.69
	Add 15% for contractor's profit and overheads				1372.60
	Cost for 30 sqm				10523.29
	Cost for 1 sqm				350.78
	Say				350.80

22.21 Extra for covering top of membrane with Geotextile, 120gsm non woven, 100% polyester of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation [for Item No. 25.18 to 25.20]

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 30 sqm				
	MATERIALS :				
	Geotextile 120 gsm membrane =30 sqm				
	Add 5% for wastage = 1.5 sqm. Total 31.50m^2				
8207	Geotextile 120 gsm membrance	sqm	31.50	25.00	787.50
9999	Carriage of Geotextile	L.S.	7.80	1.00	7.80
	LABOUR:				
0159	Skilled torch operator or fitter 2.16 ÷ 5 = 0.43	Day	0.43	151.50	65.14
0130	Mistry 0.18-5 = 0.04	Day	0.04	151.50	6.06
0114	Beldar 3.24-5 = 0.65	Day	0.65	135.25	87.91
9999	Sundries, torch, LPG etc	L.S.	46.80	1.00	46.80
	TOTAL				1001.21
	Add 1 % for water charges				10.01
	TOTAL-				1011.22
	Add 15% for contractor's profit and overheads				151.68
	Cost for 30 sqm				1162.90
	Cost for 1 sqm				38.76
	Say				38.75

SUB HEAD : 23.0

HORTICULTURE AND LAND SCAPING

23.1 Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing of by spreading and neatly levelling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 cum.				
	Labour				
0114	Beldar	Day	0.71	135.25	96.03
9999	Sundries	L.S	2.73	1.00	2.73
0115	collies	Day	0.35	135.25	47.34
	TOTAL				146.10
	Add 1 % for water charges				1.46
	TOTAL				147.56
	Add 15% for contractor's profit and overheads				22.13
	Cost per 10 cum.				169.69
	Cost per cum				16.97
	Say				16.95

23.2 Supplying and stacking of good earth at site including royalty and carriage upto 1 km (earth measured in stacks will be reduced by 20% for payment).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	Excavation:				
0114	Beldar	Day	0.177	135.25	23.94
0115	Coolies	Day	0.167	135.25	22.59
0979	Royalty for good earth	cum	1.00	11.00	11.00
2241	Carriage of good earth by mechanical transport upto 1 km lead	cum	1.00	66.51	66.51
	TOTAL				124.04
	Add 1 % for water charges				1.24
	TOTAL				125.28
	Add l5% for contractor's profit and overheads				18.79
	Cost per cum.				144.07
	Say				144.05

23.3 Supplying and stacking sludge at site including royalty and carriage upto 1 km (sludge measured in stacks will be reduced by 8% for payment),

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
2317	Carriage of sludge by mechanical transport upto 1 km lead	cum	1.00	57.83	57.83
0980	Royalty of sludge	cum	1.00	60.00	60.00
	TOTAL				117.83
	Add 1% for water charges				1.18
	TOTAL				119.01
	Add 15% for contractor's profit and overheads				17.85
	Cost per cum.				136.86
	Say				136.85

23.4 Supplying and stacking at site dump manure from Badli or other approved source, including carriage upto 1 km manure measured in stacks will be reduced by 8% for payment):

23.4.1 Screened through sieve of I.S. designation 20mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
2242	Carriage of dump manure (by mechanical transport)	cum	1.00	57.83	57.83
	Labour for screening:				
0114	Beldar	Day	0.08	135.25	10.82
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				71.38
	Add 1% for water charges				0.71
	TOTAL				72.09
	Add 15% for contractor's profit and overheads				10.81
	Cost per cum.				82.90
	Say				82.90

23.4 Supplying and stacking at site dump manure from Badli or other approved source, including carriage upto 1 km manure measured in stacks will be reduced by 8% for payment):

23.4.2. Screened through sieve of I.S. designation 16 mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
2242	Carriage of dump manure (by mechanical transport)	cum	1.00	57.83	57.83
	Labour for screening :				
0114	Beldar	Day	0.13	135.25	17.58
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				78 14
	Add 1% for water charges				0.78
	TOTAL-				78.92
	Add 15% for contractor's profit and overheads				11.84
	Cost per cum.				90.76
	Say				90.75

23.4 Supplying and stacking at site dump manure from Badli or other approved source, including carriage upto (manure measured in stacks will be reduced by 8% for payment):

23.4.3 Screened through sieve of I.S. designation 4.75mm

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
2242	Carriage of dump manure (by mechanical transport)	cum	1.00	57.83	57.83
	Labour for screening :				
0114	Beldar	Day	0.17	135.25	22.99
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				83.55
	Add 1% for water charges				0.84
	TOTAL				84.39
	Add 15% for contractor's profit and overheads				12.66
	Cost per cum.				97.05
	Say				97.05

23.5 Rough dressing the trenched ground including breaking clods.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1OO.00sqm.				
	Labour:				
0114	Beldar	Day	0.20	135.25	27.05
9999	Sutndries	L.S	1.43	1.00	1.43
	Total				28.48
	Add 1 % for water charges				0.28
	Total				28.76
	Add 15% for contractor's profit and overheads				4.31
	Cost for 100.00 Sqm.				33.07
	Say				33.05

23.6 Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100 .00sqm.				
	Labour:				
0114	Beldar	Day	0.33	135.25	44.63
0115	Coolies	Day	0.33	135.25	44.63
9999	Sundries	L.S	2.73	1.00	2.73
	Total				91.99
	Add 1 % for water charges				0.92
	Total				92.91
	Add 15% for contractor's profit and overheads				13.94
	Cost for 100 Sqm.				106.85

23.7 Fine dressing the ground.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100sqm.				
	Labour:				
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S	1.43	1.00	1.43
	TOTAL				69.05
	Add 1 % for water charges				0.69
	TOTAL				69.74
	Add 15% for contractor's profit and overheads				10.46
	Cost for 100 Sqm.				80.20
	Say				80.20

23.8 Spreading of sludge, dump manure or/and good earth in required thickness (Cost of sludge, dump manure or/ and good earth to be paid separately).

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1.00 cum				
	Labour:				
0114	Beldar	Day	0.07	135.25	9.47
9999	Sundries	L.S	0.52	1.00	0.52
	TOTAL				9.99
	Add 1 % for water charges				0.10
	TOTAL				10.09
	Add 15% for contractor's profit and overheads				1.51
	Cost for 1.00 cum				11.60
	Say				11.60

23.9 Mixing earth and sludge or manure in proportion specified or directed.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 cum				
	Labour:				
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolies	Day	0.25	135.25	33.81
	TOTAL				67.62
	Add 1 % for water charges				0.68
	TOTAL				68.30
	Add 15% for contractor's profit and overheads				10.24
	Cost for 10 cum				78.54
	Cost for 1 cum				7.85

23.10 Grassing with 'Doob' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (the good earth shall be paid for separately).

23.10.1 In rows 15 cm apart in either direction.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100sqm.				
	Labour:				
0114	Beldar	Day	0.25	135.25	33.81
0115	Coolies	Day	0.50	135.25	67.82
9999	Sundries	L.S	2.73	1.00	2.73
	TOTAL				104.16
	Add 1 % for water charges				1.04
	TOTAL				105.20
	Add 15% for contractor's profit and overheads				15.78
	Cost for 100 Sqm.				120.98
	Say				121.00

23.10 Grassing with 'Doob' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (the good earth shall be paid for separately).

23.10.2 In rows 7.5 cm apart in either direction.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100sqm.				
	Labour:				
0114	Beldar	Day	0.50	135.25	67.62
0115	Coolies	Day	1.06	135.25	143.36
9999	Sundries	L.S	5.33	1.00	5.33
	TOTAL				216.32
	Add 1 % for water charges				2.16
	TOTAL				218.47
	Add 15% for contractor's profit and overheads				32.77
	Cost for 100 Sqm.				251.25
	Say				251.25

23.10 Grassing with 'Doob' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (the good earth shall be paid for separately).

23.10.3 In rows 5 cm apart in either direction.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 100sqm.				
	Labour:				
0114	Beldar	Day	0.80	135.25	108.20
0115	Coolies	Day	1.60	135.25	216.40
9999	Sundries	L.S	6.76	1.00	6.76
	TOTAL				331.36
	Add 1 % for water charges				3.31
	TOTAL				334.67
	Add 15% for contractor's profit and overheads				50.20
	Cost for 100 Sqm.				384.87
	Say				384.85

23.11 Renovating lawns including weeding, cheeling the grass, forking the ground, top dressing with sludge or manure, mixing the same with forked soil, watering and maintaining the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing and disposal of rubbish as directed, including supplying good earth if needed but excluding the cost of sludge or manure (the good earth shall be paid for separately).

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 100sqm.				
	Labour:				
0114	Beldar	Day	2.70	135.25	365.18
0115	Coolies	Day	2.00	135.25	270.50
9999	Sundries	L.S	2.73	1.00	2 .73
	TOTAL				638.41
	Add 1 % for water charges				6.38
	TOTAL				644.79
	Add 15% for contractor's profit and overheads				96.72
	Cost for 100 Sqm.				741.51
	Say				741.50

23.12 Uprooting rank vegetation and weeds by digging the area to a depth of 60cm removing all weeds and other growth with roots by forking repeatedly, breaking clods, rough dressing, flooding with water, uprooting fresh growths after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm.				
	1. Labour for trenching to a depth of 30cm-				
0114	Beldar	Day	1.50	135.25	202.88
0115	Coolies	Day	0.75	135.25	101.44
	2. Labour for forking to remove weeds and rank vegetation-				
0114	Beldar	Day	1.00	135.25	135.25
0115	Coolie	Day	0.50	135.25	67.62
	3. Labour for trenching to a further depth of 30cm-				
0114	Beldar	Day	2.13	135.25	288.08
0115	Coolie	Day	1.06	135.25	143.36
	4. Removal of weeds from the trenched area with 10 to 15 days of its flooding with water as per item No. 23.6				
0114	Beldar	Day	0.33	135.25	44.63
0115	Coolie	Day	0.33	135.25	44.63
9999	Sundries	L.S.	2.73	1.00	2.73
	5. Rough dressing as per item No. 23.5				
0114	Beldar	Day	0.20	135.25	27.05
9999	Sundries	L.S.	1.43	1.00	1.43
	6. Fine dressing as per item No. 23.7				
0114	Beldar	Day	0.50	135.25	67.62
9999	Sundries	L.S.	1.43	1.00	1.43
9999	Sundries	L.S.	6.76	1.00	6.76
	TOTAL				1 134.91
	Add 1 % for water charges on A				11.35
	TOTAL				1 146.26
	Add 15% for contractor's profit and overheads on (A+B)				171.94
	Cost for 100 Sqm.				1318.20
	Say				1 318.20

23.13 Preparation of beds for hedging and shrubbery by excavating 60cm deep and trenching the excavated base to a further depth of 30cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, levelling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and levelling as directed, within a lead of 50m lift upto 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 10 cum.				
	Labour:				
0114	Beldar	Day	1.80	135.25	243.45
0115	Coolies	Day	1.25	135.25	169.06
	TOTAL				412.51
	Add 1 % for water charges				4.13
	TOTAL				416.64
	Add 15% for contractor's profit and overheads				62.50
	Cost for 10 cum.				479.14
	Cost per cum				47.91
	Say				47.90

23.14 Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) ;-

23.14.1 Holes 1.2 m dia and 1.2 m deep.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one hole-				
	Extra Excavation-				
	$22/7x(1.2)^2/4x1.2 = 1.36$ cum.				
(A)	Rate vide item No. 2.8.1 Earth work	cum	1.36	103.40	140.62
9999	Refilling mixture and flooding	L.S	5.20	1.00	5.20
	TOTAL				145.82
	Add 1% for water charges on all except 'A'				0.05
	TOTAL				145.87
	Add 15% for contractor's profit and overheads on all except 'A'				0.79
	Cost per hole				146.66
	Say				146.65

23.14 Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) ;-

23.14.2 Holes 60 cm dia and 60 cm deep.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one hole-				
	Extra Excavation-				
	$22x(0.6)^2/4x0.60=0.17$cum				
(A)	Rate vide item no. 2.8.1. Earth work	cum	0.17	103.40	17.58
9999	Refilling mixture and flooding	L.S	1.43	1.00	1.43
	TOTAL				19.01
	Add 1% for water charges on all except 'A'				0.01
	TOTAL				19.02
	Add 15% for contractor's profit and overheads on all except 'A'				0.22
	Cost per hole				19.24
	Say				19.25

23.15 Half brick circular tree guard in 50 class designation bricks, internal diameter 1.25 metre and height 1.2 metre above ground and 0.20 m below ground bottom two courses laid dry and top three courses in lime mortar 1:2 (1 lime putty : 2 surkhi) or cement mortar 1:6 (1 cement : 6 fine sand) and the intermediate courses being in dry honey comb masonry as per design complete:

23.15.1 With F.P.S. Bricks

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one tree guard				
	Materials:				
2603	Brick 3rd class	1000 Nos	230	1700.00	391.00
2201	Carriage of bricks	1000 Nos	230	141.88	32.63
9999	Lime or cement mortar top 3 courses	L.S	15.86	1.00	15.86
	Labour:				
0124	Mason 2nd class	Day	0.25	141.60	35.40
0114	Beldar	Day	0.25	135.25	33.81
9999	Sundries	L.S	4.16	1.00	4.16
	TOTAL				512.86
	Add 1 % for water charges				5.13
	TOTAtr-				517.99
	Add 15% for contractor's profit and overheads				77.70
	Cost per tree guard				595.69
	Say				595.70

23.16 Providing and fixing M.S. flat iron tree guard 60cm dia. and 2m height above ground level formed of 4 nos. 25x6mm and 8 nos. 25x3mm vertical M.S. flats rivetted to 3 nos. 25x6mm M.S. flat iron rings in two halves, bolted together with 8mm dia. and 30mm long bolts including painting two coats with paint of approved brand and manufacture over a coat of priming, complete in all respects.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one tree guard- materials M.S. Flats:- 25x6mm vertical 4x2.25= 9.00m 25x6mm rings 3x(22/7x0.6)+0.16 = 6.14m Total = 15.14m wt. @ 1.2kg per m = 18.17kg. 25x3.00mm verticals 8x2= 16m 16.00x0.25=0.40 sqm. wt. @24.73kg/sqm. = 9.89kg. Total M.S. Flats = 28.06kg + wastage @5% = 1.40kg Total = 29.46kg.				
1008	Say 0.29 quintal	quintal	0.29	2 900.00	841.00
9999	Rivets 36 nos.	L.S.	40.30	1.00	40.30
9999	G.I. Bolts and nuts	L.S.	8.06	1.00	8.06
2205	Crriage of material	tonne	0.029	47.29	1.37
	Labour:				
0103	Blacksmith 2nd class	Day	2.00	141.60	283.20
0114	Beldar	Day	1.00	135.25	135.25
	Painting- 4x2x0.03x2.0 = 0.496+ 8x2x0.028x2.00 = 0.896+ 2x6.14x0.031 =0.381 Total = 1.773 Say 1.77 sqm.				
(A)	(Rate as per item No. 13.50.4 of S.H. Finishing)	sqm	1.77	7.15	12.66
(B)	(Rate as per item No. 13.61.1 of S.H. Finishing)	sqm	1.77	35.35	62.57
	TOTAL				1384.41
	Add 1% for water charges on all except 'A' and' B				13.09
	TOTAL				1391.50
	Add, 15% for contractor's profit and overheads on all except 'A' and' B'				198.34
	Cost for one tree guard				1595.84
	Say				1595.85

23.17 Making tree guard 53 cm dia. and 1.3 m high as per design from empty coal tar drums supplied free by the department including providing and fixing 2 nos. M.S. sheet rings 50 x 0.5 mm with rivets complete in all respects including painting inside and outside of tree guard with :

23.17.1 A coat of coal tar.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one tree guard.				
9999	Cost of 2 putties	L.S	13.39	1.00	13.39
9999	Cost of 6mm dia xl0 mm rivets 22 nos	L.S	26.91	1.00	26.91
9999	Fire wood	L.S	2.73	1.00	2.73
	Labour:				
0103	Blacksmith 2nd class	Day	0.13	141.60	18.41
0114	Beldar	Day	0.07	135.25	9.47
9999	Sundries	L.S	1.43	1.00	1.43
(A)	Coal tarring alround inside and outside 1/2 x 2 x 22/7 x 0.53 x 1.30 = 2.16. (Rate as per item No. 13.59 of S.H. Finishing)	sqm	2.16	14.65	31.64
	TOTAL				103.98
	Add 1% for water charges on all except 'A'				0.72
	TOTAL				104.70
	Add 15% for contractor's profit and overheads on all except 'A'				10.96
	Cost for one free guard				115.66
	Say				115.65

23.17 Making tree guard 53 cm dia. and 1.3 m high as per design from empty coal tar drums supplied free by the department including providing and fixing 2 nos. M.S. sheet rings 50 x 0.5 mm with rivets complete in all respects including painting inside and outside of tree guard with :

23.17.2 Two or more coats of synthetic enamel paint of approved quality shade over a priming coat

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one tree guard.				
	Cost of one free guard				
	(Rate as per Item No. 23.17.1)	each	1.00	115.65	115.65
	Priming coat				
	(Rate as per item no. 13.50.3 of SH : Finishing)	sqm	2.16	12.65	27.32
	Painting with synthetic enamel paint				
	(Rate as per item no. 13.61.1 of SH : Finishing)	sqm	2.16	35.35	76.36
	Less cost of coal tarring (Rate as per item no. 13.59 of finishing).	sqm	2.16	14.65	(–) 31.64
	Cost of one tree guard.				187.69
	Say				187.70

23.18 Making tree guard 53 cm dia. and 2 m high as per design from empty coal tar drums supplied free by the department including providing and fixing four legs 40 cm long of 30 x 3 mm M.S. flat riveted to tree guard and providing and fixing 2 nos. M.S. sheet rings 50 x 0.5 mm with rivets complete in all respects including painting inside and outside of tree guard with :

23.18.1 A coat of coal tar.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one tree guard-				
9999	Cost of two M.S. sheet rings 50x0.5mm	L.S	13.52	1.00	13.52
9999	Cost of 6mm dia. rivets 10mm long 50 Nos.	L.S	67.21	1.00	67.21
9999	Fire wood	L.S	2.73	1.00	2.73
	Labour :				
0103	Blacksmith 2nd class	Day	0.19	141.60	26.90
0114	Beldar	Day	0.10	135.25	13.52
9999	Sundries	L.S	1.43	1.00	1.43
	4 legs of M.S. flat 30x3mm including riveting and other end sharpened for easing fixing the tree guard in the ground 4 legs 0.4 each = 1.6m.				
	1.6x0.032=0.501sqm. @ 24.73kg/sqm. =1.26 kg = 0.013q				
1008	Cost of M.S.flat	quintal	0.013	2900.00	37.70
	Carriage of M.S. flats (negligible)				
	Coal tarring alround inside and outside.				
	1/2x2x22/7x0.53x2.0 = 3.33sqm.				
	(A) (Rate as per item. 13.59 of S.H. Finishing)	sqm	3.33	14.65	48.78
	TOTAL				211.79
	Add 1% for water charges on all except 'A'				1.63
	TOTAL.				213.42
	Add 15% for contractor's profit and overheads on all except 'A'				24.70
	Cost for one tree guard				238.12
	Say				238.10

23.18 Making tree guard 53 cm dia. and 2 m high as per design from empty coal tar drums supplied free by the department including providing and fixing four legs 40 cm long of 30 x 3 mm M.S. flat riveted to tree guard and providing and fixing 2 nos. M.S. sheet rings 50 x 0.5 mm with rivets complete in all respects including painting inside and outside of tree guard with :

23.18.2 Two or more coats of synthetic enamel paint of approved quality and shade over a priming coat.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for one tree guard-				
	Rate as per item no. 23.18.1	each	1.00	238.10	238.10
	Applying priming coat				
	$^1/_2$ x 2 x 22/7 x 0.53 x 2 = 3.33 sqm				
	(Rate as per item no. 13.50.3 of SH. finishing	sqm	3.33	12.65	42.12
	Painting with synthetic enamel paint				
	(Rate as per item no 13.61.1 of SH: Finishing)	sqm	3.33	35.35	117.72
	Less cost of coal tarring				
	(Rate as per item No. 13.59 of SH : finishing)	sqm	3.33	14.65	(-) 48.78
	Cost of one tree guard				349.16
	Say				349.15

23.19 Edging with bricks laid dry length wise including excavation, refilling, consolidating with hand packing and spreading neatly surplus earth within a lead of 50 m :

23.19.1 75 class designation.

23.19.1.1 F.P.S. Bricks

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 10 m lenth-				
	Material :				
2602	Bricks 75 class designation	1000 Nos	50.00	1900.00	95.00
2201	Carriage of bricks	1000 Nos	50.00	141.88	7.09
	Labour				
0124	Mason 2nd class	Day	0.05	141.60	7.08
0115	Coolie	Day	0.05	135.25	6.76
9999	Earth work in excavation and removal of rubbish (or spereading and dressing neatly of surplus earth)	L.S	13.52	1.00	13.52
	TOTAL				129.45
	Add 1% for water charges				1.29
	TOTAL				130.74
	Add 15% for contrator's profit and overheads				19.61
	Cost per 10 m.				150.35
	Cost per meter				15.04
	Say				15.05

23.19 Edging with bricks laid dry length wise including excavation, refilling, consolidating with hand packing and spreading neatly surplus earth within a lead of 50 m :

23. 19.2 50 designation.

23.19.2.1 F.P.S. bricks.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 10m length-				
	Material :				
2603	Bricks 50 class .designation	1000 Nos	50.00	1700.00	85.00
2201	Carriage of bricks	1000 No	50.00	141.88	7.09
	Labour				
0124	Mason 2nd class	Day	0.05	141.60	7.08
0115	Coolie	Day	0.05	135.25	6.76
9999	Earth work in excavation and removal of rubbish (or spreading and dressing neatly of surplus earth)	L.S	13.52	1.00	13.52
	TOTAL				119.45
	Add 1% for water charges				1.19
	TOTAL-				120.64
	Add 15% for contractor's profit and overheads				18.10
	Cost per 10m.				138.74
	Cost per meter				13.87
	Say				13.85

23.20 Filling mixture of earth and sludge or manure in the desired proportion in trenches, flooding with water and levelling (cost of supplying earth and sludge or manure and mixing excluded).

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 10 cum.				
	Labour:				
0114	Beldar	Day	0.17	135.25	22.09
0115	Coolies	Day	0.08	135.25	10.82
	TOTAL				33.81
	Add 1 % for water charges				0.34
	TOTAL				34.15
	Add 15% for contractor's profit and overheads				5.12
	Cost for 10 cum.				39.27
	Cost per cum.				3.93
	Say				3.95

23.21 Excavation in dumped stones or malba including stacking of serviceable and unserviceable material separately and disposal of unserviceable material lead upto 50 m and lift upto 1.5 m disposed material to be neatly dressed.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	Labour:				
0114	Beldar	Day	0.35	135.25	47.34
0115	Coolies	Day	0.35	135.25	47.34
	TOTAL				94.68
	Add 1 % for water charges				0.95
	TOTAL				95.63
	Add 15% for contractor's profit and overheads				14.34
	Cost per cum.				109.97
	Say				109.95

23.22 Excavation in bajri path including stacking of serviceable and unservicable material lead upto 50m and lift upto 1.5m disposed material to be neatly dressed.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	Labour:				
0114	Beldar	Day	0.43	135.25	58.16
0115	Coolies	Day	0.35	135.25	47.34
	TOTAL				105.50
	Add 1 % for water charges				1.06
	TOTAL				106.56
	Add 15% for contractor's profit and overheads				15.98
	Cost per cum.				122.54
	Say				122.55

23.23 Excation in water bound macadam road including stacking the srviceable and unserviceable material separately and disposal of unservuceabke materil lead upto 50 m and lift upto 1.5 m disposed material to be neatly dressed.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum				
	labour:				
0114	Beldar	Day	0.53	135.25	71.68
0115	Coolie	Day	0.43	135.25	58.16
	TOTAL				129.84
	Add 1% for water charges				1.30
	TOTAL				131.14
	Add 15% for contractor's profit and overheads				19.67
	Cost per cum.				150.81
	Say				150.80

23.24 Flodding the ground with water including making kiaries and dismantling the same.

Code	Discription	Unit	Quantity	Rate	Amount
	Details of cost for 100 sqm				
	labour:				
0114	Beldar	Day	0.17	135.25	22.99
9999	Sundries	L.S.	35.88	1.00	35.88
	TOTAL				58.87
	Add 1% for water charges				0.59
	TOTAL				59.46
	Add 15% for contractor's profit and overheads				8.92
	Cost per 100 sqm.				68.38
	Say				68.40

S.NO.	Correction Slip No.	Reference No.	Contents in Brief