

PRICE BID (PART-II)

SCHEDULE-A

(SCHEDULED ITEMS)

BOQ and Scope of Work for Construction of Fabrication Shop, Open Gantry, Material Gate, Extension of Machine Shop- Bay-I,II & III, Laying of Rail Track for Battery Trolley etc. and allied utilities at BHEL, HERP , Tarna, Shivpur Varanasi

(A) SECTION-A (Civil Works)

S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
	1.0	CARRIAGE OF MATERIALS					
1		Carriage of material by mechanical transport including loading, unloading and stacking.					
(a)		Lime, moorum, building rubbish. - 1Km. Lead.	1.1.1/54	41.00	Cu.Mt.	39.53	1620.73
(b)		Earth 1Km. Lead.	1.1.2/54	9592.21	Cu.Mt.	49.42	474046.95
(c)		Brick 1Km. Lead.	1.1.8/54	58.50	1000Nos.	105.42	6167.07
(d)		Cement, stone blocks, GI, CI, AC, & CC pipes below 100mm dia and other heavy materials.	1.1.10/54	217.62	Tonne	35.14	7647.17
	2.0	EARTH WORK					
2		Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. Ordinary soil.	2.8.1/64	13400.80	Cu.Mt.	103.40	1385642.74
3		Open timbering in trenches including strutting and shoring complete (measurements to be taken of the face area timbered):					
(a)		Depth not exceeding 1.5m.	2.20.1/66	234.00	Cu.Mt.	35.20	8236.80
(b)		Depth exceeding 1.5m but not exceeding 3m.	2.20.2/67	156.00	Cu.Mt.	36.70	5725.20
4		Extra for every additional lift of 1.5 m or part thereof in all kind of soil.	2.26.1/67	3404.79	Cu.Mt.	18.90	64350.49
5		Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	2.25/67	5111.29	Cu.Mt.	45.70	233586.07



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6		Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.	2.27/67	1538.86	Cu.Mt.	301.50	463965.32
7		Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.	2.28.1/67	55.00	Sq.Mt.	5.12	281.66
8		Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.	2.31/68	14477.35	Sq.Mt.	2.64	38205.74
	4.0	CONCRETE WORK					
9		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	4.1.3/79	0.30	Cu.Mt.	3257.45	977.24
10		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).	4.1.6/79	32.34	Cu.Mt.	2713.05	87726.47
11		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:4:8 (1 cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size).	4.1.9/79	2420.09	Cu.Mt.	2296.15	5556887.61
12		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size).	4.1.10/79	13.00	Cu.Mt.	2237.75	29090.75
13		Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	4.10/81	5.59	Sq.Mt.	144.15	806.48
	5.0	REINFORCED CONCRETE CEMENT					
14		Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	5.1.3/88	810.60	Cu.Mt.	3359.60	2723291.76
15		Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge. M-25 grade reinforced cement concrete by using 380 kg. of cement per cum of concrete. All work upto plinth level.	5.33/93	1417.60	Cu.Mt.	3983.75	5647370.72

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16		Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge. M-25 grade reinforced cement concrete by using 380 kg. of cement per cum of concrete. All work above plinth level up to floor V level.	5.33A/93	470.71	Cu.Mt.	3983.75	1875175.11
17		Centering and shuttering including strutting ,propping etc. and removal of form for:					
(a)		Foundations, footings, bases of columns, etc. for mass concrete.	5.9.1/89	1732.86	Sq.Mt.	119.25	206643.56
(b)		Suspended floors, roofs, landings, balconies and access platform.	5.9.3/89	258.43	Sq.Mt.	187.35	48416.81
(c)		Lintels, beams, plinth beams, girders, bressumers and cantilevers.	5.9.5/89	2829.25	Sq.Mt.	162.65	460176.79
(d)		Columns, Pillars, Piers, Abutments, Posts and Struts.	5.9.6/89	443.88	Sq.Mt.	238.40	105820.99
(e)		Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.	5.9.13/89	13.85	Sq.Mt.	285.55	3954.87
18		Add or deduct for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	5.30/93	75.00	Rmt.	11.95	896.25
	6.0	BRICK WORK					
19		Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:Cement mortar 1:6 (1 cement : 6 coarse sand).	6.1.2/99	992.99	Cu.Mt.	2121.75	2106879.11
20		Brick work with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level in all shapes and sizes in :Cement mortar 1:4 (1 cement : 4 coarse sand).	6.4.1/99	12.84	Cu.Mt.	2601.90	33417.56
21		Brick work with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level in all shapes and sizes in :Cement mortar 1:6 (1 cement : 6 coarse sand).	6.4.2/99	703.75	Cu.Mt.	2430.25	1710284.94
22		Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level.Cement mortar 1:4 (1 cement :4 coarse sand).	6.13.2/100	7.43	Sq.Mt.	302.80	2248.29
	8.0	MARBLE WORK					
23		Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth. Granite Stone of approved shade.	8.10.2/121	6.80	Sq.Mt.	2595.00	17633.03
	9.0	WOOD AND PVC WORK					

S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
24		Providing and fixing IS : 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete.	9.84/148	4.00	Nos.	911.10	3644.40
25		Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.Twin rubber stopper.	9.101.2/150	5.00	Nos.	53.90	269.50
26		Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).	9.103/150	4.00	Nos.	435.90	1743.60
27		Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :300x16 mm.	9.96.1/149	1.00	Nos.	158.50	158.50
28		Providing and fixing aluminium tower bolts ISI marked anodised (Powder coated not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete.					
(a)		(Size 300x10mm) (DSR-2007,9.97.1/149).	9.97.1/149	15.00	Nos.	71.45	1071.75
(b)		(Size 150x10mm) (DSR-2007,9.97.4/149).	9.97.4/149	42.00	Nos.	42.75	1795.50
29		Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :					
(a)		100mm (DSR-2007, 9.100.2/150).	9.100.2/150	27.00	Nos.	35.30	953.10
(b)		75mm (DSR-2007, 9.100.3/150).	9.100.3/150	35.00	Nos.	28.35	992.25
30		Providing and fixing factory made UPVC door frame made of UPVC extruded section having an overall dimension as below (tolerance ± 1 mm) with wall thickness 2.0mm \pm 0.2mm, corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19mm and 1mm \pm 0.1mm wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturers specification and direction of Engineer-in- charge.Extruded section profile size 48x40 mm.	9.117.1/152	34.65	Rmt.	141.00	4885.65

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31		24 mm thick factory made PVC door shutters made of styles and rails of a UPVC hollow section of size 59x24 mm and wall thickness 2 mm ± 0.2 mm with inbuilt edging on both sides. The styles and rails mitred and joined at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a UPVC hollow section of size 100x24 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a UPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-incharge. (For W.C. and bathroom door shutter).	9.118.1/152-153	11.03	Sq.Mt.	2190.50	24150.26
	11.0	FLOORING					
32		Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.40mm thick with 20mm nominal size stone aggregate.	11.3.1/172	732.00	Sq.Mt.	192.95	141239.40
33		52 mm thick cement concrete flooring with concrete hardener topping under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume .hardening compound is mixed @ 2 litre per 50kg of cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	11.4/172	540.00	Sq.Mt.	286.55	154737.00
34		62 mm thick cement concrete flooring with concrete hardener topping under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6mm nominal size) by volume. Hardening compound is mixed @ 2 litre per 50kg of cement or as per manufactures specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	11.5/172	10808.00	Sq.Mt.	318.65	3443969.20
35		Providing and laying Ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory, Grey, Fume Red Brown laid on320mm thick bed of Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigments etc., complete.	11.38/178	48.98	Sq.Mt.	630.80	30896.22

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36		Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	11.36/177	173.65	Sq.Mt.	556.60	96653.03
37		Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc., complete.Size of Tile 60x60 cm.	11.41.2/178	181.83	Sq.Mt.	1031.85	187619.38
	12.0	ROOFING					
38		Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	12.22/189	14.00	Nos.	108.00	1512.00
39		Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes.110 mm diameter.	12.41.2/192	53.70	Rmt.	163.40	8774.58
40		Providing and fixing on wall face unplasticised-PVC moulded fittings/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion:					
(a)		Bend 87.5 degree .110 mm bend.	12.42.5.2/192	14.00	Nos.	134.20	1878.80
(b)		Single tee with door.110x110x110 mm.	12.42.3.2/192	14.00	Nos.	260.70	3649.80
(c)		Coupler, 110mm.	12.42.1.2/192	20.00	Nos.	101.65	2033.00
41		Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.110mm.	12.43.2/192	42.00	Nos.	96.90	4069.80
	13.0	FINISHING					
42		15 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.	13.10/202	1724.86	Sq.Mt.	128.50	221643.89
43		15 mm cement plaster on the rough side of single or half brick wall of mix :1:6 (1 cement: 6 fine sand).	13.2.2/201	3524.13	Sq.Mt.	78.55	276820.56

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44		12 mm cement plaster of mix :1:6 (1 cement: 6 fine sand).	13.1.2/201	3042.60	Sq.Mt.	67.65	205831.55
45		6 mm cement plaster of mix :1:3 (1 cement: 3 fine sand).	13.16.1/202	234.54	Sq.Mt.	62.15	14576.72
46		Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	13.26/203	1586.77	Sq.Mt.	47.20	74895.61
47		Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade New work (two or more coats) over and including priming coat with cement primer.	13.41.1/204	3216.09	Sq.Mt.	41.55	133628.60
48		Finishing walls with water proofing cement paint of required shade New work (Two or more coats applied @ 3.84 kg/10Sq.mt).	13.44.1/204	3702.09	Sq.Mt.	30.80	114024.28
49		Forming groove of uniform size from 12x12mm and upto 25x15mm 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.	13.76/208	345.00	Rmt.	13.30	4588.50
	14.0	REPAIRS TO BUILDING					
50		Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. meters 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 :With cement mortar 1:4 (1 cement : 4 fine sand).	14.1.1/215	18.00	Sq.Mt.	114.35	2058.30
	15.0	DISMANTLING AND DEMOLISHING					
51		Demolishing R.C.C. 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.	15.3/226	45.08	Cu.Mt.	537.55	24232.75
52		Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	15.7.4/226	142.75	Cu.Mt.	310.75	44359.56
53		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.	15.18/228	82000.00	Kg.	0.85	69700.00
54		Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.	15.41/229	1728.00	Sq.Mt.	8.60	14860.80
55		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 : Bituminous road.	15.43.2/229	188.50	Sq.Mt.	66.30	12497.55
56		Dismantling G.I. pipes (external work) including excavation and efilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :					
(a)		15mm to 40mm nominal bore.	15.44.1/230	7.50	Rmt.	24.90	186.75



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(b)		Above 40mm nominal bore.	15.44.2/230	4.25	Rmt.	29.05	123.46
57		Demolishing C.C. /R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1000m, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	15.58/231	46.75	Cu.Mt.	731.05	34176.59
58		Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge:	15.9.2/226	35.25	Cu.Mt.	370.75	13068.94
59		Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :					
(a)		Of area 3 sq. metres and below.	15.12.1/227	10.00	Nos.	54.60	546.00
(b)		Of area beyond 3 sq. metres.	15.12.2/227	2.00	Nos.	75.35	150.70
60		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.	15.56/231	100.00	Sq.Mt.	8.20	820.00
	16.0	ROAD WORK					
61		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.	16.1/240	4739.14	Sq.Mt.	33.90	160656.73
62		Supplying and stacking at site.					
(a)		90 mm to 45 mm size stone aggregate.	16.3.1/240	710.87	Cu.Mt.	742.30	527679.15
(b)		63 mm to 45 mm size stone aggregate.	16.3.2/240	710.87	Cu.Mt.	768.45	546268.42
(c)		53 mm to 22.4 mm size stone aggregate.	16.3.3/240	737.87	Cu.Mt.	810.55	598080.91
63		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 fill up interstices of coarse aggregate watering and compacting to the required density.	16.4/240	2132.61	Cu.Mt.	192.55	410634.33

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64		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 cm ² 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 filler and primer 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.	16.43/246	947.83	Cu.Mt.	3692.20	3499567.96
	17.0	SANITARY INSTALLATIONS					
65		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 :White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	17.1.1/263	4.00	Nos.	2304.65	9218.60
66		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 :W.C. pan with ISI marked white solid plastic seat and lid.	17.3.1/263	3.00	Nos.	3282.95	9848.85
67		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 : Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.	17.5.1 / 264	9.00	Nos.	3720.30	33482.70
68		Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.					
(a)		32mm dia.	17.28.2.1/267	9.00	Nos.	46.80	421.20
(b)		40mm dia.	17.28.2.2/267	7.00	Nos.	49.10	343.70
69		Providing and fixing 600x450 mm beveled 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.	17.31/267	7.00	Nos.	493.65	3455.55
70		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 :100 mm inlet and 75 mm outlet. Sand cast iron S&S as per IS - 3989.	17.60.2.1/272-273	22.00	Nos.	573.35	12613.70

S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
71		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) : 100 mm dia.	17.61.1/273	20.00	Rmt.	152.45	3049.00
	18.0	WATER SUPPLY					
72		Providing and fixing G.I. Pipes complete with G.I. fittings and clamps i/c making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall:					
(a)		15 mm dia nominal bore.	18.11.1/292	340.00	Rmt.	144.75	49215.00
(b)		20 mm dia nominal bore.	18.11.2/292	220.00	Rmt.	170.60	37532.00
73		Providing and fixing PTMT grating of approved quality and colour.100 mm nominal dia.	18.58.1.1/301	23.00	Nos.	39.70	913.10
74		Providing and fixing PTMT grating of approved quality and colour.125 mm nominal dia.with 25mm waste hole.	18.58.1.2/301	17.00	Nos.	46.65	793.05
75		Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :32 mm nominal bore.	18.17.2/293	3.00	Nos.	358.00	1074.00
76		Providing and fixing uplasticised PVC connection pipe with brass unions :15 mm nominal bore.	18.21.2.1/294	22.00	Nos.	44.75	984.50
77		Providing and fixing C.P. brass bib cock of approved quality conforming to IS: 8931. 15mm nominal bore.	18.49.1/300	10.00	Nos.	313.10	3131.00
78		Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.15 mm nominal bore.	18.51.1/300	7.00	Nos.	315.80	2210.60
79		Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931. 15 mm nominal bore.	18.52.1/300	24.00	Nos.	313.10	7514.40
	19.0	DRAINAGE					
80		Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :					
(a)		150 mm diameter S.W. pipe.	19.3.2/315	120.00	Rmt.	255.10	30612.00
(b)		200 mm diameter S.W. pipe.	19.3.3/315	164.00	Rmt.	299.85	49175.40
81		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 :150 x 100 mm size P type.With F.P.S. bricks class designation 75.	19.4.2.1/316	7.00	Nos.	961.95	6733.65

S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
82		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 :					
(a)		450 mm dia. R.C.C. pipe.	19.6.5/316	250.00	Rmt.	499.55	124887.50
(b)		500 mm dia. R.C.C. pipe.	19.6.6/316	250.00	Rmt.	584.85	146212.50
(c)		600 mm dia. R.C.C. pipe.	19.6.7/316	350.00	Rmt.	895.10	313285.00
83		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 :	19.9.1.1/317-318	25.00	Nos.	4933.50	123337.50
	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) : With F.P.S. bricks class designation 75.						
84		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:With 20x20 mm square bar.	19.15.1/319	200.00	Nos.	149.85	29970.00
85		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 :					
(a)		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) : With F.P.S. bricks with class designation 75.	19.7.1.1/317	6.00	Nos.	5383.70	32302.20
(b)		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) :With F.P.S. bricks class designation 75.	19.7.2.1/317	5.00	Nos.	11882.20	59411.00
86		Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality.L D- 2.5. Rectangular shape 600x450mm internal dimensions.	19.19.1.1/320	10.00	Nos.	883.25	8832.50

S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
87		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 : Inside dimensions 455x610 mm and 45 cm deep for single pipe line. With F.P.S. bricks.	19.30.1.1/322	9.00	Nos.	3146.40	28317.60
88		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.With F.P.S. bricks.	19.32.1/323	1.00	Nos.	9938.60	9938.60
	21.0	ALUMINIUM WORK					
89		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 / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and paneling to be paid for separately) :					
(a)		Powder coated aluminium (minimum thickness of powder coating 50 micron).	21.1.1.2/337	50.60	Kg.	306.30	15500.23
(b)		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).Powder coated aluminium (minimum thickness of powder coating 50 micron).	21.1.2.2/337	1114.81	Kg.	326.60	364096.56
90		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):With float glass panes of 5.50 mm thickness.	21.3.2/338	202.85	Sq.Mt.	673.55	136629.48
91		Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum 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.Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	21.2.1/337	15.98	Sq.Mt.	776.05	12401.28



S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
	22.0	WATER PROOFING					
92		<p>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 .</p> <p>c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-Charge</p> <p>d) Finishing the surface with 20mm 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 300 x300mm square 3m 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: With average thickness of 120mm and minimum thickness at khurra as 65mm.</p>	22.7.1/347	232.08	Sq.Mt.	541.05	125569.54

We hereby quote our rates

% Above/ At Par/ Below to DSR'2007 Rates for all items Sl. No.1 to 92.

SECTION-A (Electrical Works)

93		Supply and fixing 20amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20amps 'C' series, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required. Make - Schneider/Legrand/Havells (SOR-Internal (Part-1)2007, 2.62).	(SOR-Internal (Part-1)2007, 2.62)	104.00	Nos.	520.00	54080.00
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S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
94		Supply and fixing following way, three pole and neutral, prewired, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with loose wire box, terminal blocks duly prewired with suitable size FR PVC insulated copper conductor upto terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator). 6 Way (4+18), Double Door. Make Legrand/Schneider/Havells (SOR-Internal (Part-1)2007, 2.42.6).	(SOR-Internal (Part-1)2007, 2.42.6)	12.00	Nos.	6941.00	83292.00
95		Supply and fixing following way, three pole and neutral, prewired, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with loose wire box, terminal blocks duly prewired with suitable size FR PVC insulated copper conductor upto terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator). 4 Way (4+12), Double Door. Make Legrand/Schneider/Havells (SOR-Internal (Part-1)2007, 2.42.5)	(SOR-Internal (Part-1)2007, 2.42.5)	10.00	Nos.	5395.00	53950.00
96		Supply and fixing following way, single pole and neutral, prewired, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks, tinned copper busbar, neutral link, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required. (But without MCB/RCCB/ Isolator) 2+4 way, Double Door. Make Legrand/Schneider (SOR-Internal (Part-1)2007, 2.41.4).	(SOR-Internal (Part-1)2007, 2.41.4)	1.00	Nos.	2139.00	2139.00
97		6 amps. To 32 ampps, ratings, SP MCB, "B" series, 10KA breaking capacity. Make Legrand/Schneider/Havells (SOR-Internal (Part-1)2007, 1701).	(SOR-Internal (Part-1)2007, 1701)	220.00	Nos.	65.00	14300.00
98		6 amps. To 32 ampps, ratings, SP MCB, "C" series, 10KA breaking capacity. Make Legrand/Schneider (SOR-Internal (Part-1)2007, 1706).	(SOR-Internal (Part-1)2007, 1706)	120.00	Nos.	72.00	8640.00
99		6 amps. To 32 ampps, ratings, DP MCB, "B" series, 10KA breaking capacity. Make Legrand/Schneider/Havells (SOR-Internal (Part-1)2007, 1703).	(SOR-Internal (Part-1)2007, 1703)	1.00	Nos.	150.00	150.00
100		63 amps. Rating, 4 pole ELCB + MCB 100mA/300mA sensitivity. Make Legrand/Schneider/Havells (SOR-Internal (Part-1)2007, 1728).	(SOR-Internal (Part-1)2007, 1728)	22.00	Nos.	1357.00	29854.00
101		Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with piano type Switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required. Group A Make Legrand/Anchor/Havells (SOR-Internal (Part-1)2007, 1.8.1).	(SOR-Internal (Part-1)2007, 1.8.1)	55.00	Nos.	264.00	14520.00
102		Wiring for circuit / submain wiring alongwith earth wire with the following sizes of PVC insulated copper conductor, single core cable in surface / recessed PVC conduit as required. 2 × 1.5 sq.mm + 1 × 1.5 sq. mm earth wire. Make Polycab/Havells/ Anchor (SOR-Internal (Part-1)2007, 1.14.1) .	(SOR-Internal (Part-1)2007, 1.14.1)	300.00	Mt.	71.00	21300.00

S.N.	DSR Code	Description of Work	DSR-2007 (Reprint-2010) Item Code/ Page No.	Total Qty.	Unit	DSR'2007 Rate	Amount (In Rs.)
103		Wiring for circuit / submain wiring alongwith earth wire with the following sizes of PVC insulated copper conductor, single core cable in surface / recessed PVC conduit as required. 2 × 2.5 sq.mm + 1 × 2.5 sq. mm earth wire. Make Polycab/Havells/Anchor (SOR-Internal (Part-1)2007, 1.14.2).	(SOR-Internal (Part-1)2007, 1.14.2)	650.00	Mt.	81.00	52650.00
104		Wiring for circuit / submain wiring alongwith earth wire with the following sizes of PVC insulated copper conductor, single core cable in surface / recessed PVC conduit as required. 2 × 4 sq.mm + 1 × 4 sq. mm earth wire. Make Polycab/Havells/Anchor (SOR-Internal (Part-1)2007, 1.14.3).	(SOR-Internal (Part-1)2007, 1.14.3)	100.00	Mt.	97.00	9700.00
105		Supply and fixing of metal box of 150mm x 75mm x 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection, painting etc. as required. (For light plugs to be used in non residential buildings). Make Legrand/Anchor/Havells (SOR-Internal (Part-1)2007, 1.29).	(SOR-Internal (Part-1)2007, 1.29)	30.00	Nos.	102.00	3060.00
106		Supply and fixing of metal box of 180mm x 100mm x 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 5/6 amps & 15/16 amps socket outlet and 15/16amps piano type switch, connection, painting etc. as required. Make Legrand/Anchor. (SOR-Internal (Part-1)2007, 1.30).	(SOR-Internal (Part-1)2007, 1.30)	14.00	Nos.	161.00	2254.00
107		Stepped type Fan regulator. Make Legrand/Anchor/Havells (SOR-Internal (Part-1)2007, 1408).	(SOR-Internal (Part-1)2007, 1408)	8.00	Nos.	207.00	1656.00
108		Modular blanking plate. Make Legrand/Anchor/Havells (SOR-Internal (Part-1)2007, 1411).	(SOR-Internal (Part-1)2007, 1411)	55.00	Nos.	7.00	385.00

We hereby quote our rates

% Above/ At Par/ Below to DSR'2007 Rates for all items Sl. No. 93 to 108.

NOTE: (1) Parties to quote their rates Above/ At Par/ Below in Percentage for total Scheduled DSR'2007 items of Section-A , Civil Items appearing from item Sl. No.1 to 92 and Electrical Items appearing from Sl. No.93 to 108.



PRICE BID (PART-II)

SCHEDULE-A

NON- SCHEDULED ITEMS

BOQ and Scope of Work for Construction of Fabrication Shop, Open Gantry, Material Gate, Extension of Machine Shop- Bay-I,II & III, Laying of Rail Track for Battery Trolley etc. and allied utilities at BHEL, HERP , Tarna, Shivpur Varanasi

SECTION-B (Civil Works)

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
109	Shifting of pipes and cables including disposal of unserviceable material within 50 metres lead as per direction of engineer-in-charge.	475.00	Rmt.		
110	Dismantling of RCC/PCC of length exceeding 8m but not exceeding 11m, including wire/cable.	12.00	Nos.		
111	Layout of building and making reference pillars etc. complete with all respect as per instruction of engineer-in-charge.	8310.00	Sq.Mt.		
112	Layout of building and making reference pillars etc. with checking of alignment, top levels, span digonals, foundation top, column, crane girders, rails by using modern electronic surveying instrument like total station complete with all respect as per instruction of engineer-in-charge.	2735.00	Sq.Mt.		
113	Providing and injecting chemical emulsion for Preconstructional antitermite treatment and creating a chemical barrier under and around the column pits, wall trenches, basement excavation top surface of plinth, filing junction of walls and floors , along the external perimetre of building, expanion joints, surrounding of pipes and conduit etc. complete plinth area of the building at ground floor only shall be measured as per IS 6313 (Part- II 1981) Aldrine exulsifiable concentrate or any other approved material such as chloropyriphos or Heptrachlor or chlordance will be used. The rate of application of chemical emulsion shall be as follows:				
(i)	Treatment for Masonary and foundation 5 liters per Sq.Mt.	230.00	Sq.Mt.		
(ii)	Back fill in immediate contact with foundation 7.5 liters per Sq.Mt.				
(iii)	Treatment of top surface of plinth filling 5 litres per Sq.Mt.				
(iv)	Treatment of junctions of walls and the floors 7.5 litres per Sq.Mt.				

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
(v)	Treatment of soil along External perimeter of building 7.5 litres per Sq.Mt.				
(vi)	Treatment of soil under apron along external perimeter 5 liters per Sq.Mt.				
114	Supply & filling of good earth in plinth under floors including watering, ramming, consolidating and dressing complete including supply of all material, labour ,T&P, royalties and duties etc required for proper completion of work.	145.00	Cu.Mt.		
115	Making grooves 10 mm to 12 mm wide 8mm deep in plaster of the wall or in ceiling vertically or horizontally as required.	31.00	Rmt.		
116	Making drip course in sun shade or fascia as per direction of engineer-in-charge including supply of all materials labour etc. required for proper completion of the work.	42.00	Rmt.		
117	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 :White Vitreous China Angle back wash basin size 600x480 mm (oval shape) with single 15 mm C.P. brass pillar tap.	5.00	Nos.		
118	Dag belling 15 cm (6)deep one line allgned flags and Jhandies and directed by engineer in charge. & Fixing of levels along pipe line both sides.	1700.00	Rmt.		
119	Fencing with angle iron post placed at top of each column in 'Y' shape of ISA- 35x35x6mm embedded in RCC top beam, it also includes the Concertina Coil of 600mm dia. With GI staples, turn brackets complete with all respect as per insruction of engineer-in-charge.	1000.00	Rmt.		
120	Supply and fixing of PVC pipe 225mm dia. for inlet, outlet and over flow complete with all respects.	225.00	Rmt.		
121	Bore hole 400mm dia. 50m depth complete with all respects.	250.00	Rmt.		
122	Supply & installation of 200mm dia. Perphorated PVC pipe complete with all respects.	250.00	Rmt.		
123	2.00 to 4.75mm size pea gravel supply and filling in between bore hole and perphorated PVC pipe.	25.00	Cu.Mt.		
124	2.00 to 4.75mm size pea gravel supply duly screened and washed.	27.00	Cu.Mt.		
	FABRICATION WITH PAINTING WORKS				
125	Fabricating and erecting structural steel works at all heights comprising sag rods floor beams, columns, girders, rails bracings, clamps, purlins with channels & angles, gutters with M.S. plates, M.S. flat supports including all connections as per detailed drawings connected steel works etc. cleats, gusset plates all bolts, nuts washers base plates anchor bolts etc., as per detailed drawings cutting welding and painting 2 coats of red oxide primer before erection & 2 coats of synthetic enamel paint of approved brand & colour after errection complete. Advani made electrodes or other approved make electrodes are to be used. all bolts nuts washers, gas, electrodes paints are in contractors scope.	17100.00	Qtl.		

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
126	Providing, erecting and fixing of SMP color coated Galvolum Sheet (approved Make) trapezoidal profile 0.5mm thick. sheeting in its place with the fasteners of high quality corrosion resistant grade of self tapping/self drilling (STSD) type approved make provided with suitable cap fixed at the rate not more than 1.5 m center to center. (detail are given in Annexure -I).	11000.00	Sq.Mt.		
127	Polycarbonate Sheet : Providing, fitting and fixing, fire retardant and U.V. resistant polycarbonate clean sheet of minimum 3mm thickness (profile to match with profile of metal sheeting) at various elevations including all labour, material, fasteners, scaffolding, equipment and side laps, cutting of openings, preparation of working drawings, testing etc. all complete as per specifications, Drawings and instructions of the Engineer. (detail are given in Annexure - I).	4000.00	Sq.Mt.		
128	Supply and fixing Aluminium Composite Panel (ACP) 4mm thick complete with structural frame work and necessary fittings with all respect as per instruction of engineer - in - charge.	70.00	Sq.Mt.		
	FIRE FIGHTING SYSTEM				
129	S.I.T.C. external (yard)hydrant stand post type comprising of stand post, plain duck foot flanged bends, butterfly valve 80mm (PN 1.6)and single headed S.S male coupling valve confirming to IS:5290:1985.The stand post column shall be galvanized iron size 80 mm confirming to IS:1239 (heavy class) The out let shall be angled to the ground with an instantaneous spring lock type gun metal female coupling of 63 mm dia for connecting to the hose pipe (as per drawing) (OMEX/SB).	12.00	Nos.		
130	S.I.T.C. first aid fire hose reel wall mounting swinging type complete with drum bracket and 20mm dia 30 mtr. Long high pressure Dunlop hose reel IS:444 tubing with gun metal shutoff nozzle confirming to IS: 8090-1976 with 5 mm orifice. The hose reel shall be as per IS:884-1985 (OMEX).	12.00	Nos.		
131	Providing 100% synthetic flax canvas NON-percolating Fire Hose type "A" ISI marked 63 mm dia 15 mtr. Long with S.S & female coupling (IS:903 bound & riveted to hose pipes with copper rivets and copper wire. (OMEX).	24.00	Nos.		
132	Providing and fixing of 63 mm dia short branch with 20 mm dia nozzle.	12.00	Nos.		
133	Providing fixing testing and commissioning of M.S pipe (IS:1239/3589 part-1-2) medium class (B) including cutting screwing welding etc. and providing all fittings. The cost shall include for cost of elbows, reducers, clamps, hangers, etc. as required, including cutting holes and chases in brick or RCC walls/slabs and making goods complete. (TATA C Class Heavy).				
(a)	150 mm dia (APROX).	60.00	Rmt.		
(b)	80 mm dia (APROX).	60.00	Rmt.		
134	S.I.T.C. of butterfly valves class PN-1.6 including welding of flanges nut bolt rubber packing etc.				
(a)	150 mm dia.	1.00	Nos.		
135	S.I.T.C. of N.R.V. including welding of flanges nut bolts rubber packing etc. ISI marked.				
(a)	150 mm dia.	1.00	Nos.		

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
136	S.I.T.C. of Gun Metal gate valve ISI marked screwed type IS:778-1984 25 mm.	12.00	Nos.		
137	S.I.T.C. of Aluminium fire hose cabinet standard size (600x500x300 mm) 1.6 MM sheet with front glass door and locking arrangement.	12.00	Nos.		
138	S.I.T.C. Fire Brigade inlet four way connection at under ground tank comprising of the following (a) 4 Way suction collecting head of CI body 63mm dia. With instantaneout type male coupling, and blank cap and chain.	1.00	Nos.		
139	ISI marked 5 kg capacity abc type fire extinguishers with high pressure discharge hose, squee/e grip nozzl.	25.00	Nos.		
140	ISI marked 4.5 kg capacity co2 type fire extinguishers with high pressure discharge hose, squee/e grip nozzl.	25.00	Nos.		
141	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete (reinforcement bars will be supplied free of cost from BHEL store).Thermo-Mechanically Treated bars.	2160.00	Qtl.		
142	Making groove in floor of size (4.50m x 4.50m) & 10mm wide and 12mm deep in green concrete (within 24 hour from casting) filling the grove by poly sulphide sealent using masking tape and repair of edges if required complete with all respect as per instruction of engineer-in-charge.	5085.00	Rmt.		
143	Making septic tank capacities 50 users of size (3.70 x 0.90 x 1.20m) . The liquid surface there should be free board (open space of 30cm to 45cm.complete with all respects as per instruction of engineer in charge.	1.00	No.		

SECTION-B (Electrical Works)

144	Supply, Installation, Testing & Commissioning of Main Lighting Distribution Panel as SLD Drg. No. FP/EL-01 shall be made CRCA sheet 2 mm thk. Powder Coated Comprise Pattern each MCCB Feeder Details as under I/C - 250 A MCCB Micro Proccesor - O / L, S / C & E / F equipped, O/G - 63 A, 4-Pole, MCCB, 25 KA breaking capacity, 18-Nos., Make - L & T, Semiens And Schneider/Legrand.	1.00	Nos.		
	BUS-BAR - Main 300 A TPN EC Gr. / incase of Al. Bus Bar Size 50 x 6 mm. Shall be used and MCB 63 A shall be connect from main busbar incase of CU wire 16 sq mm. and 32 A MCB 6 sq mm.				
	METERING SET - Volt Meter and Amper Meter 96 x 96 mm Flash Mounted Volt scale 0 -500 V, Amper scale 0-250 A, CT - Ratio tape bound 250 / 5 - dia 75 mm. 3-Nos. VSS and ASS R, Y & B indication procuted with 6 A contrl Fuse.				
145	Supply and fixing of integral industrial highbay light of 250 Watt, revenue high bulb with high pressure, metal halide with connection & Mounting Arrangement by using of 25 x 3mm MS Angle. Make Phillips HPK 225 HPL 250.	320.00	Nos.		

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
146	Earthing BFC chemical 70 mm, 3 mt. long with earth chamber for lighting arrestor.	8.00	Nos.		
147	Earthing BFC chemical 50 mm, 3 mt. long with earth chamber for body earth and neutral.	14.00	Nos.		
148	Copper lighting arrestor suitable for 6 KA.	4.00	Nos.		
149	Supply and laying of GI Strip (50 × 6mm) for body earth with using by GI clamp.	1350.00	Mt.		
150	Supply and laying of 4c × 16mm ² copper armoured cable in trench. Make Glostor/Universal/CCI/Torrent/National.	450.00	Mt.		
151	Supply and laying of 4c × 10mm ² copper armoured cable in trench. Make Glostor/Universal/CCI/Torrent/National.	1175.00	Mt.		
152	Supply and laying of 4c × 4mm ² copper armoured cable in trench. Make Glostor/Universal/CCI/Torrent/National.	1100.00	Mt.		
153	Supply and laying of 3c × 2.5mm ² copper armoured cable (Red, Black, Green Color) supported by U type MS clamp and necessary hardware. Make Glostor/Universal/CCI/Torrent/National.	5900.00	Mt.		
154	Supply and laying of GI strips (25 × 6mm) with using by 25 mm DMC Insulator for Lighting Arrestor.	200.00	Mt.		
155	Providing and making of cable termination by using heavy duty single compression brass gland and by using aluminium, copper crimping lug.				
(a)	4C × 16 mm ²	32.00	Nos.		
(b)	4C × 10 mm ²	23.00	Nos.		
(c)	4C × 4 mm ²	20.00	Nos.		
(d)	3C × 2.5 mm ²	153.00	Nos.		
156	Supply and fixing of 1200mm dia swing ceiling fan, 1 phase, 230 volts with MS Fan box 3mm thick. Make Crompton Greves/Khetan/Orient.	8.00	Nos.		
157	Installation, testing and commissioning of 300 mm dia swing exhaust fan, 1 phase 230 volts with 19mm thick waterproof plywood duly painted. Make Crompton Greves/Khetan /Orient.	6.00	Nos.		
158	Installation, testing and commissioning of Ceiling Mounted Light 36 Watt with 25mm MS Deep Junction Box. Make Phillips, TBX 322.	12.00	Nos.		
159	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq.mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required. Make Phillips TC090.	10.00	Mt.		
160	Installation, testing and commissioning of wall bracket light / CFL, 18 Watt with holder. Make Phillips.	13.00	Nos.		
161	Installation, testing and commissioning of computer socket for computer network by using RJ-45 computer socket. Make Legrand/Anchor.	12.00	Nos.		

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
162	Supply and laying of computer wire CAT-6, using of 25mm PVC conduit. Make Polycab/Anchor.	1200.00	Mt.		
163	Supply and fixing of 32 amps, 240 volt SPN Industrial type socket outlet with 2 pole and earth metal enclosed plug top along with 32 amps "C" series MCB for AC/Make-Legrand/Schneider.	2.00	Nos.		
164	Supply and laying of 8 SWG GI wire.	295.00	Mt.		
165	Supply and fixing of decorated basin light with 10 watt CFL. Make Phillips FBH120 PLC.	8.00	Nos.		
166	Installation, Testing and Commissioning of 100 KVA, LT Transformer 0.4/0.4 KV, oil cooled, indoor type. Both side cable box required.	1.00	Nos.		
167	Supply of Galvanized Steel High Mast Lighting System of 20 Mtrs. With it accessories. Mast shall be in Two section, Hot Dip Galvanized and suitable with wind velocity as per IS:875 Part-3. It shall also include accessories for high mast including head frame, 6mm dia. stainless steel wire rope of 316 grade double drum winch, galvanized Lantern Carriage Symmetrically arrangement suitable for 12-Nos. Non integral flood light fitting with die cast aluminium housing and heat and resistant toughened glass cover IP-65 COMPLETE WITH 2 Nos. die cast control gear box for 400 watt luminaires (2x400 watt), 4 nos. 1 x 400 watt Non integral die cast flood light fitting with toughened glass cover IP-65 & its control gear boxes and lighting finial. The mast shall have an integral power tool installed inside the base compartment for its operation. the high mast having 150mm top, 460mm bottom, sheet thickness 3mm top & 4mm bottom PCD 550 mm (as per attached TDS) Foundation Bolts, anchor plate and template suitable for above mast. Make Crompton Greeaves / GE/ Phillips.	1.00	Nos.		
168	Supply of Galvanized Steel Mid High Mast Lighting System of 16 Mtrs. With it accessories. Mast shall be Hot Dip Galvanized and suitable with wind velocity as per IS:875 Part-3. It shall also include accessories for mid high mast including head frame, 6mm dia. stainless steel wire rope of 316 grade double drum winch, galvanized Lantern Carriage Symmetrically arrangement suitable for 12-Nos. Non integral flood light fitting with die cast aluminium housing and heat and resistant toughened glass cover IP-65 COMPLETE WITH die cast control gear box for 1 x 400 watt Non integral die cast flood light fitting with toughened glass cover IP-65 & its control gear boxes and lighting finial. The mast shall have an integral power tool installed inside the base compartment for its operation. the high mast having 150mm top, 460mm bottom, sheet thickness 3mm top & 4mm bottom PCD 550 mm (as per attached TDS) Foundation Bolts, anchor plate and template suitable for above mast. Make Crompton Greeaves / GE/ Phillips.	2.00	Nos.		
169	Supply and fixing of MS tray 300 mm (2mm thick) with duly painted.	175.00	Mt.		
170	Supply and fixing of Heat Extractor with Mounting Arrangement.	84.00	Nos.		
171	Providing and fixing telephone socket for telephone network by using RJ-11 phone Socket. Make Legrand/Anchor.	12.00	Nos.		

S.N.	Description of Work	Total Qty.	Unit	Rate	Amount (In Rs.)
172	Providing and laying telephone network cable for Broadband, Internet telephone from administrative building. 20 pair Jeely field cable. Cable laying, 3" dia 2mm thick rigid PVC pipe (700mm) depth in ground. Make Polycab/Anchor/Havells.	400.00	Mt.		
173	Providing & laying telephone network cable for Broadband, Internet telephone with 5 pair telephone wire in 20mm dia 1.5mm thick rigid PVC pipe on RCC ceiling, False Celing & Wall. Make Polycab/Anchor/Havells.	400.00	Mt.		
174	Providing & Installation of 20 pair crowm type telephone tag block box with 20 pair crowm.	1.00	Nos.		
175	Supply and laying of 3.5c × 185mm ² aluminium armoured cable in trench. Make Glostor/Universal/CCI /Torrent/ National.	20.00	Mt.		
176	Providing and making of cable termination by using heavy duty single compression brass gland and by using aluminium, crimping lug. 3.5C x 185 mm ²	4.00	Nos.		

NOTE: (1) Parties to quote their individual rates for all the Non-Scheduled items of Section-B related to Civil and Electrical works and appearing from Sl. No.109 to 176.

DETAILED SPECIFICATION & LIST OF MAKE OF DIFFERENT MATERIALS

SI No	ITEM DESCRIPTION																										
(A)	Galvolum Sheet -Specification																										
	Supply and installation of SMP colour coated (blue etc) Galvolum (approved make) trapezoidal profile sheeting in its place with the fasteners of high quality corrosion resistant grade of self tapping / self drilling (STSD) type of "Hilti" or approved make provided with suitable cap fixed at the rate not more than 1.50 m center to center or with screw less profile (reverse profile), minimum 41 mm high crest depth placed @ 215-230 mm c/c , manufactured out of 0.55 mm (TCT) hi-tensile Galvolum steel (AZ-150 gsm) , Aluminium- Zinc alloy metallic coating total on both sides as per ASTM-792 A / AS: 1397, min. 550 MPa yield stress). Exterior coat of SMP (Silicon Modified Polyester), 20 micron top coat applied over 5 micron primer and a 5 micron polyester back coat applied over 5 microns primer as per IS: 14246. The sheet shall have wide pans with 2 small stiffening ribs for effective water shedding and special male/female ends for purlin spacing @1.5mtr. c/c. The cost includes all labour and T & P for any height required for proper completion of work as per direction of Engineer I/C.																										
(B)	Polycarbonate Sheet																										
	The section cover requirements of providing, erecting and fixing of polycarbonate sheet of approved colour and approved transparency on roof for the purpose of roof lighting. The material to be used shall not be less than 3mm thick, and shall be profiled to exactly match the profile of pre-quoted metal sheet to be used for general roof site cladding. Sheet shall be supplied in maximum length that can be transported and erected without causing damage to the sheet, but in any case the length shall not be less than 10m materials shall be free from scratches and other surface damage. Material shall be U-V treated and shall be tested quality.																										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Test</th> <th style="text-align: center;">Result</th> </tr> </thead> <tbody> <tr> <td>Flammability</td> <td></td> </tr> <tr> <td>Self ignition</td> <td style="text-align: center;">570 o C</td> </tr> <tr> <td>Smoke density</td> <td style="text-align: center;">54%</td> </tr> <tr> <td>Burning extent</td> <td style="text-align: center;">less than 1.0</td> </tr> <tr> <td>Weathering</td> <td></td> </tr> <tr> <td>Weathering evaluation</td> <td style="text-align: center;">Successful exposure to concentrated Sunlight radiation</td> </tr> <tr> <td>Colour change</td> <td style="text-align: center;">Not more than 3 units after 60 months</td> </tr> <tr> <td>Light transmission</td> <td style="text-align: center;">Shall not decrease more than 10 points after 60 months</td> </tr> <tr> <td>-Ditto-</td> <td style="text-align: center;">Shall not decrease by more than 6% after 10 years</td> </tr> <tr> <td>Heat exposure</td> <td style="text-align: center;">No darkening effect</td> </tr> <tr> <td>Water penetration</td> <td style="text-align: center;">No penetration</td> </tr> <tr> <td>Impact</td> <td style="text-align: center;">Repels hail storm of 25 mm at Velocity of 21m/sec</td> </tr> </tbody> </table>	Test	Result	Flammability		Self ignition	570 o C	Smoke density	54%	Burning extent	less than 1.0	Weathering		Weathering evaluation	Successful exposure to concentrated Sunlight radiation	Colour change	Not more than 3 units after 60 months	Light transmission	Shall not decrease more than 10 points after 60 months	-Ditto-	Shall not decrease by more than 6% after 10 years	Heat exposure	No darkening effect	Water penetration	No penetration	Impact	Repels hail storm of 25 mm at Velocity of 21m/sec
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Expansion/contraction	Linear thermal change of 0.065 mm / m /oC
U-V Filtration	Transmission less than 0.1%
Modulus of Elasticity	24000 kg / sq cm
Installation	
Sheet shall be installed in sequence and fixed to purlin with polymer quoted galvanised hexagon heated self drilling self tamping screw side lap shall be as per manufacturer specification end lap shall be 225mm joints with metal sheet shall be shield with butyl - based adhesive the edge shall be shield with Silicone Sealant as per manufacturer specification and than covered with butyl - based adhesive tap. All materials and product shall confirm to the relevant standard specification IS codes ASTM and other relevant codes etc. The equivalent manufacturer will be only considered with prior approval of consultant in case of non-availability/unforeseen difficulties.	

ITEM DESCRIPTION	MAKE
WATER PROOFING COMPOUND & OTHER CHEMICALS	SIKA, MC
PAINTS	ASIAN, NEROLAC
WALL PUTTY	J.K. WHITE, BIRLA WHITE
SANITARY FITTINGS	JAQUAR, PLUMBER, HINDWARE, CERA
GI PIPES	TATA, QST
TILES	KAJARIA, REGENT, SOMANY
MORTIC LATCHES	GODREJ
ELECTRICAL FITTINGS	HAVELLS, ANCHOR, PHILLIPS
GLASS	SAINT GOBIN, MODI
GRIT	DALA GRIT
SAND	COARSE - DUDDHI
	FINE - CHOPAN
	LOCAL SAND - GANGA
GALVOLUME SHEET	TRACKDECK, HILTI, DURACOAT, KERBY
POLYCARBONATE SHEET	GE Lexan, Danpolan, Dibbutz

Note : Make of the Items indicated in BOQ shall supersede the makes indicated in this Annexure.