

MASTER ABSTRACT ESTIMATED COST FOR MAJOR PROJECT (PHASE-II)				
SL. NO	NAME OF BUILDING	ESTIMATED COST		
		DSR ITEMS	NON-DSR ITEMS	TOTAL
1	GOLDEN JUBLEE BUILDING	552873860.83	401785608.02	954659468.85
2	MECHANICAL SCIENCE BUILDING	282667453.65	225802603.26	508470056.90
3	LECTURE HALL COMPLEX (No. 2)	186542278.19	201994679.64	388536957.82
4	FACULTY RESIDENCE	212209383.36	98701810.62	310911193.98
5	FACULTY RESIDENCE BASEMENT PARKING	21736162.98	10864630.36	32600793.34
6	1000 SEATED HOSTEL	574741685.50	116041786.00	690783471.50
		GRAND TOTAL=		2885961942.40
NOTE:	In case of any calculation error found in the amount of any individual item, the respective item rate will remain firm and will be considered while payment.			

CONSTRUCTION OF 1000 BEDDED HOSTEL (SATISH DHAWAN HALL)(PHASE-II) AT N.I.T. ROURKELA			
ABSTRACT OF COST			
	DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
1	1.1INTERNAL CIVIL PART-1	504396923.00	94488947.00
2	1.2 INTERNAL WATER SUPPLY AND SANITARY-PART-III	17672777.50	0.00
3	1.3 .INTERNAL ELECTRICAL-PART-III	11074048.00	8445651.00
4	1.4 FIRE FIGHTING-PART-1V	0.00	5792550.00
5	2.1Civil Work Including Road work- part - I	28452519.00	944850.00
6	2.2 External Water Supply and Sanitary Items--Part-II	12843247.00	2081001.00
7	2.3External Electrical -Part-III	302171.00	4288787.00
	SUB TOTAL	574741685.50	116041786.00
	G.TOTAL	690783471.50	

Signature of N.I.T.

1 / 43

Abstract of Cost

Signature of Contractor

PROJECT:1000 STUDENTS HOSTEL AT NIT,ROURKELA						
SCHEDULE-A-INTERNAL						
1.1 SCHEDULE - A -PART- I (CIVIL)						
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
		SCHEDULE-A-INTERNAL				
		1.1 SCHEDULE - A PART- I (CIVIL)				
		Carriage of Material				
1	1.1.2	Carriage of excavated earth including loading ,unloading and stacking as per the instruction of engineer incharge upto 1 Km	8500.00	Cum	82.78	703630.00
		EARTH WORK				
2	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30cm in depth. 1.5 m in width aswell as 10 sqm on plan) including disposal of excavated earth, leadupto 50m and lift upto 1.5m, disposed earth to be levelled and neatlydressed.				
	2.6.1	All kinds of soil	18860.00	Cum	129.35	2439541.00
3	2.7	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means over areas (exceeding 30 cm in depth, 1.5 m in width aswell as 10 sqm on plan) including disposal of excavated earth, leadupto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatlydressed.				
	2.7.1	Ordinary rock	90.00	Cum	197.75	17797.50
	2.7.3	Hard rock (blasting prohibited)	90.00	Cum	490.10	44109.00
4	2.8	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 o 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.				
	2.8.1	All kinds of soil.	90.00	Cum	130.80	11772.00
5	2.9	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or10 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 soils as directed, with in a lead of 50 m.				
	2.9.1	Ordinary rock	90.00	Cum	212.00	19080.00
	2.9.3	Hard rock (blasting prohibited)	90.00	Cum	491.95	44275.50
6	2.24	Extra rates for quantities of work,excluded				
	2.24.1	in or under water and /or liquid mud,including pumping out water as required	90.00	Cum	42.40	3816.00
	2.24.2	in or under foul position ,including pumping out water as required	90.00	Cum	98.39	8855.10
7	2.25	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 upto 50 m and lift upto 1.5 m.	30354.00	Cum	83.80	2543665.20

8	2.26	Extra for every additional lift of 1.5 m or part there of in excavation /banking excavated or stacked materials.				
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
	2.26.1	All kinds of soil.	3828.80	Cum	34.60	132476.48
	2.26.2	Ordinary or hard rock.	15300.00	Cum	62.00	948600.00
9.00	2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment)	100.00	Cum	110.75	11075.00
9.1	2.36	Deduct for disposed soil not levelled and neatly dressed (against Item No. 2.6.&2.7)	17482.00	Cum	25.35	443168.70
		Cement Concrete Work				
10.1	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinthlevel :				
	4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	1254.70	Cum	4514.05	5663778.54
11.1	4.1.9	1:4:8 (1 Cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size).	1079.00	Cum	3331.25	3594418.75
12.1	4.10	Providing and laying damp-proof course 40 mm thick with cement concrete1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mmmnominal size).	614.00	Sqm	207.55	127435.70
13.1	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.				
		CC 1:2:4 concrete qty required 6.48 bags of cement per cum	166.00	50 Kg of cement	35.35	5868.10
14.1	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement:3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	811.00	Sqm	338.75	274726.25
		Reinforcement Cement Concrete Work				
15.1	5.3	Reinforced cement concrete work in beams, suspended floors, roof shaving slope up to 15° landings, balconies, shelves, chajjas, lintels,bands, plain window sills, staircases and spiral stair cases up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement, with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	45.00	Cum	5494.55	247254.75
16.1	5.5	Reinforced cement concrete work in arches, arch ribs, domes,vaults, shells, folded plate and roofs having slope more than 15° up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	45.00	Cum	5684.55	255804.75
17.1	5.12	Providing, hoisting and fixing up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but excluding cost of reinforcement, with 1:2:4 (1cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size).	126.00	Cum	5265.20	663415.20
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
18.1	5.13	Providing, hoisting and fixing up to floor five level precast reinforced cement concrete in small lintels not exceeding 1.5 m clear span up to floor fivelevel, including the cost of required centering, shuttering but excluding the cost of reinforcement, with 1:2:4 (1 cement : 2 coarse sand : 4graded stone aggregate 20 mm nominal size).	95.00	Cum	8720.30	828428.50
20	5.29	Providing and fixing sheet covering over expansion joints with iron screw as per design to match the colour / shade of wall treatment.				
	5.29.2.1	150mm wide.	750.00	meter	437.30	327975.00
21	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work,using cement content work,using cement concrete as per approved design mix,inclunding pumping of concrete to site of laying but excluding the cost of centering,shuttering ,finishing reinforcement,inclunding admixtures in recommended proportions as per IS:9103 to accelerate,retard setting of concrete,improve workability without impairing strength and durability as per drection of Engineer-in-charge.(Note:Cement content considered in this item is @ 330 kg/cum.Excess/less cement used as per design mix is payable/recoverable seperately)				
	5.33.1	All works up to Plinth level.	3534.00	Cum	5242.15	18525758.10
22	5.33.2	All works above plinth & up to floor V level.	5820.00	Cum	5781.50	33648330.00

23	5.35	Deduct for using less cement than the quantity as provided in the item of batch mix concrete/RMC as arrived as per mix design.	225.00	quintal	589.80	132705.00
24	5.37	Providing and laying in Position ready mixed M-25 grade concrete for reinforced cement concrete work ,using cement concrete as per approved design mix,manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads ,having continuous agitated mixer,manufactured as per mix design of specified grade for reinforced cement concrete work,including pumping of R.M.C from transit mixer to site of laying,excluding the cost of centering , shuttering and finishing reinforcement,including cost of admixers 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.(Note:Cement content considered in this item is @ 330 kg/cum.Excess/less cement used as per design mix is payable/recoverable seperately)				
	5.37.1	All works up to Plinth level.	3649.00	Cum	5590.60	20400099.40
25	5.37.2	All works above plinth & up to floor V level.	5636.00	Cum	6130.00	34548680.00
26	5.1	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:				
	5.1.2	1:1.5:3 (1 cement,1.5 coarse sand,3 graded stone aggregate 20mm nominal size)	1724.00	Cum	5094.85	8783521.40
27	5.2	Reinforced Cement concrete work in walls (any thickness),including attached pilasters,buttresses,plinth and string courses,fillets,columns,pillars,piers,abutments,posts and struts				
	5.2.2	1:1.5:3 (1 cement,1.5 coarse sand,3 graded stone aggregate 20mm nominal size)	2715.00	Cum	5735.75	15572561.25
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
		Centering / Shuttering				
28	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. For mass concrete.	6765.00	Sqm	166.90	1129078.50
29	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	1970.00	Sqm	285.15	561745.50
30	5.9.4	Shelves (Cast in situ)	197.00	Sqm	311.20	61306.40
31	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	39816.00	Sqm	262.25	10441746.00
32	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts.	35187.00	Sqm	365.60	12864367.20
33	5.9.7	Stairs,(excluding landings) except spiral-staircases.	3863.30	Sqm	326.30	1260594.79
34	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards	105.00	Sqm	470.10	49360.50
35	5.9.14	Extra for shuttering in circular work (20% of respective centering and shuttering items).(against 5.9.6)	383.00	Sqm	73.12	28004.96
35(a)	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.	100.00	Sqm	470.10	47010.00
36	5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bedplates, anchor blocks and the like	94.00	Sqm	166.90	15688.60
37	5.9.16	Edges of slabs and breaks in floors and walls.				
	5.9.16.1	Under 20 cm wide	8932.00	Rm	99.45	888287.40
38	5.9.19	Weather shade, Chajjas, corbels etc., including edges.	4160.00	Sqm	411.10	1710176.00
39	5.9.20	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick.	30846.00	Sqm	488.05	15054390.30
40	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de- shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).				
	5.11.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	447.00	Sqm	121.65	54377.55
41	5.22	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete upto plinth level				
	5.22.6	Thermo-Mechanically Treated bars.	1467124.00	Kg	62.25	91328469.00
	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete above plinth level..In all floors				
	5.22.6	Thermo-Mechanically Treated bars.	1499020.00	Kg	62.25	93313995.00
		Brick work				
42	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks ofclass designation 7.5 in foundation and plinth in:				
	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	130.00	Cum	3316.55	431151.50

43	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	170.00	Cum	3876.15	658945.50
44	6.13	Half brick masonry with common burnt clay F.P.S. (non modular) brick of class designation 7.5 in superstructure above plinth level up to floor V level.				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	210.00	Sqm	476.85	100138.50
45	6.15	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	4273.00	Sqm	63.30	270480.90
		Marble work				
46	8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, pre-moulded and pre-polished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.				
	8.2.1	Raj Nagar Plain white marble/ Udaipur green marble/ Zebrablack marble				
	8.2.1.1	Area of slab upto 0.50 sqm	397.00	Sqm	1894.75	752215.75
	8.2.2	Granite of any colour and shade				
	8.2.2.1	Area of slab upto 0.50 sqm.	398.00	Sqm	3041.15	1210377.70
47	8.3	Providing edge moulding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	8.3.1	marble work	1857.00	Rm	105.70	196284.90
	8.3.2	Granite work	489.00	Rm	178.75	87408.75
48	8.5	Extra for providing opening of required size & shape for wash basin/kitchen sink in kitchen platform, vanity counter and similar location in marble/Granite/stone work, including necessary holes for pillar tapset etc. including moulding, rubbing and polishing of cut edges etc. complete.	198.00	Each	281.10	55657.80
49	8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	90.00	Sqm	163.10	14679.00
50	8.10	Providing and fixing stone slab with 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.				
	8.10.2	Granite Stone of approved shade.	64.00	Sqm	2942.05	188291.20
		Joineries (wood work and PVC Work)				
51	9.21	Providing and fixing ISI marked flush door shutters conforming to IS :2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	2819.00	Sqm	1578.30	4449227.70
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
52	9.22	Extra for Providing and fixing flush doors with decorative veneering instead of non decorative ISI marked flush door shutters conforming to IS: 2202(Part I)				
	9.22.1	On one side only	2819.00	Sqm	371.70	1047822.30
53	9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured).	2820.00	Sqm	325.20	917064.00
54	9.42	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 3087 marked, including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade, nickel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets, including fixing with 25x3 mm M.S. flat 10 cm long fixed to pelmet with hollock wood cleats of size 100 mm x 40 mm x 40 mm on both inner side of pelmet and rawl plugs 75 mm long etc. all complete.	3437.00	Per metre	298.45	1025772.65
55	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
	9.48.1	Fixed to steel windows by welding.	61626.00	Kg	90.75	5592559.50

56	9.53	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarsesand : 6 graded stone aggregate 20mm nominal size).	1238.00	Each	96.75	119776.50
57	9.117	Providing and fixing factory made UPVC door frame made of UPVC extruded sections having an overall dimension as below (tolerance±1mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the doorframe 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 19 mm and 1mm (± 0.1mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge				
	9.117.2	Extruded section profile size 42x50 mm	1917.00	Rm	177.05	339404.85
58	9.118	Providing and fixing to existing door frames				
	9.118.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm (± 0.2 mm), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanised/plastic brackets of size 75x220 mm having wall thickness 1.0mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 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-in-charge.	416.00	Sqm	2587.25	1076296.00
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
59	10.14	Providing and fixing pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness, including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strike- plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:				
	10.14.1.1	Fixing with adjustable lugs with split end tail to each jamb	7375.98	Rm	346.75	2557621.07
59(a)	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	200.00	Kg	558.00	111600.00
		Flooring				
60	11.4	52mm thick cement concrete flooring with concrete hardener topping, under layer 40mm 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 mixed @ 2 litre per 50 Kg of cement or as per manufacture's specifications. This includes cost of cement slurry, But excluding the cost of nosing of steps etc complete.	2105.00	Sqm	420.50	885152.50
61	11.6	Cement Plaster Skirting up to 30cm height, with cement mortar 1:3 (1 cement:3 coarse sand), finished with a floating coat of neat cement.				
	11.6.1	18mm thick	227.00	Sqm	258.20	58611.40
62	11.13	Providing and fixing glass strips in joints of terrazzo/cement concrete floors				
	11.13.1	40mm wide and 4mm thick	757.00	Rm	29.40	22255.80
63	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
	11.26.1	25 mm Thick	16586.10	Sqm	945.70	15685474.77
64	11.27	Kota stone slabs 20mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement:3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete	790.45	Sqm	954.10	754168.35

65	11.36	Providing and fixing 1st 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.	1316.40	Sqm	724.25	953402.70
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
66	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc., complete.	80.40	Sqm	764.55	61469.82
67	11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption 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.				
	11.41.2	Size of Tile 600x600 mm	9000.00	Sqm	1337.10	12033900.00
68	11.43	Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477 in average 3mm thickness.	80.00	Sqm	336.75	26940.00
69	11.46	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete.				
	11.46.2	Size of Tile 600x600 mm	8360.00	Sqm	1339.20	11195712.00
		Roofing				
70	12.22	Making khurras 45x45 cm with average minimum thickness of 5cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x 1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete..	178.00	Each	148.75	26477.50
71	12.41	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with sealing conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.				
	12.41.2	110 mm diameter	4644.00	Rm	206.90	960843.60
72	12.42	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.				
	12.42.5	Bend 87.5°				
	12.42.5.2	110 mm bend.	635.40	Each	156.95	99726.03
	12.42.6	Shoe (Plain)				
	12.42.6.2	110 mm Shoe.	319.20	Each	287.05	91626.36
73	12.43	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm 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.				
	12.43.2	110 mm	2014.00	Each	144.60	291224.40
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
74	12.51	Providing and fixing pre-coated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester topcoat 15-18 microns using self drilling/ self tapping screws complete :				
	12.51.6	Gutter (600 mm over all girth)	83.00	Rm	750.70	62308.10
		Finishing				
75	13.1	12 mm cement plaster of mix :				
	13.1.2	1:6 (1 cement : 6 fine sand) - for inside	60964.00	Sqm	112.50	6858450.00
76	13.2	15 mm cement plaster on the half brick wall of mix :				
	13.2.2	1:6 (1 cement: 6 fine sand)	66784.00	Sqm	130.20	8695276.80
77	13.21	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	90.00	Sqm	37.40	3366.00

78	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. (First additional height)	11986.00	Sqm	28.85	345796.10
		(Second & Third additional height)	8834.00	Sqm	28.85	254860.90
79	13.26	Providing and applying birla wall care putty of 2 mm thickness overplastered surface to prepare the surface even and smooth complete.	93443.50	Sqm	83.80	7830565.30
80	13.28	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand) :				
	13.28.3	Raised Band				
		100mm width - Around Parapet	19068.50	Cm Per metre	2.85	54345.23
81	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	62805.00	Sqm	11.75	737958.75
82	13.81	Distempering with 1st quality acrylic distemper, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	13.81.2	Two coats	60599.00	Sqm	34.40	2084605.60
83	13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :				
	13.43.1	Water thinnable cement primer	1098.00	Sqm	27.55	30249.90
84	13.45	Finishing wall with textured exterior paint of required shade.				
	13.45.1	New work (Two or more coats applied @3.28 ltr/10sqm) over and including priming coat of exterior primer applied @2.20kg/10sqm.	65000.00	Sqm	117.70	7650500.00
85	13.46	Finishing walls with Acrylic smooth exterior paint of required shade:				
	13.46.1	New work (Two or more coats applied @1.67ltr/10sqm) over and including priming coat of exterior primer applied @2.20kg/10sqm.	65000.00	Sqm	67.50	4387500.00
		Applying priming coat :				
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
86	13.50.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	2901.98	Sqm	25.85	75016.18
87	13.50.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	3592.00	Sqm	11.40	40948.80
88	13.82	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour				
	13.82.2	Two coats	45.00	Sqm	56.60	2547.00
89	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	4191.00	Sqm	53.85	225685.35
90	13.68	French spirit polishing :				
	13.68.1	Two or more coats on new works including a coat of wood filler.	90.00	Sqm	137.45	12370.50
91	13.76	Forming groove of uniform size from 12x12 mm and upto 25x15 mm in the top layer of washed stone grit plastered surface as per approved pattern, including providing and fixing aluminum channels of appropriate size and thickness (not less than 2 mm), nailed to the under layer with rust proof screws and nails and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	7500.00	Rm	72.15	541125.00
92	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	6905.00	Sqm	39.30	271366.50
		ALUMINIUM WORK				
93	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 PVC/neoprene felt 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) :				
	21.1.1	For fixed portion				
	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	15000.00	Kg	387.60	5814000.00

94	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)	5000.00	Kg	436.35	2181750.00
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):				
	21.3.1	With float glass panes of 4.0 mm thickness	695.00	Sqm	725.35	504118.25
	21.3.2	With float glass panes of 5.50 mm thickness	695.00	Sqm	905.75	629496.25
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
	21.3.3	With float glass panes of 8 mm thickness	1000.00	Sqm	1227.80	1227800.00
96	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	2500.00	Rm	75.10	187750.00
97	21.12	Providing and Fixing aluminium tubular handle bar 32mm outer dia ,3.0mm thick and 2100mm long with SS screws etc.complete as per direction of Engineer incharge				
	21.12.1	Anodised (AC15)aluminium tubular handle bar.	20.00	Each	498.85	9977.00
98	21.18	Providing and fixing 12mm thick frameless toughened glass door shutter of approved brand and manufacture,including providing and fixing top and bottom pivot and spring type fixing arrangement and making necessary holes etc. for fixing required door fittings,all complete as per derrection of Engineer- in -charge.(Door handle,lock and stopper etc. to be paid seperately).	50.00	Sqm	4444.75	222237.50
		Water Proofing				
99	22.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the likeconsisting of : (i)1st course of applying cement slurry @ 4.4 kg/sqm mixed withwater proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical andhorizontal surface. (ii)IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarsesand) mixed with water proofing compound in recommendedproportion including rounding off junction of vertical and horizontalsurface. (iii)IIIRD course of applying blown or residual bitumen applied hot at1.7 kg. per sqm of area. (iv)IVth course of 400 micron thick PVC sheet. (Overlaps at jointsof PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	4490.00	Sqm	399.60	1794204.00
100	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				
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
		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 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.	10698.00	Sqm	786.70	8416116.60
		Total Civil Cost DSR Items				504396923.00
		SCHEDULE-A-INTERNAL			(A)	504396923.00

505283273.00
505283273.00

		NON SCHEDULE ITEM PART- I (CIVIL)				
1	NSR	Providing and applying of cementitious crystalline based water proofing for concrete rafts,wall,water tanks,concrete floors,Positive & Negative Sides of the Retaining Wall etc. with crystal T1/T2 system. The application to be done from - ve (negative) / +ve (positive)side on a wet open pore concrete surface with brush @ 0.8 Kg of crystal T2 as per manufacture specification. including making grooves of 10 x 15 mm size on the construction joints and treating with crystal T1:1 part of clear water as per manufactures specification etc. and as per direction of engineer - in -charges. The rate also includes the clearing of surface to be treated with air compressor wherever required.	770.00	Sqm	737.00	567490.00
1(a)	NSR-1 (a)	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	1807.00	Cum	300.00	542100.00
2	NSR	Providing Filling the Expansion joint with joint sealing compound on polyurethane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete. 50mm thick Horizontal expansion joint.				
		Providing Filling the Expansion joint with joint sealing compound on polyurethane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete. 50mm thick Vertical expansion joint.	250.00	R.M	1583.00	395750.00
3	NSR	Providing Filling the Expansion joint with joint sealing compound on polyurethane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete. 50mm thick Vertical expansion joint.				
			750.00	R.M	1583.00	1187250.00
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
4	NSR	Floor finish with ceramic tiles (Kajaria /Euro or equivalent) (300x300) 7mm thick, water absorptions less than 0.05% conforming to ISO 10545 part 3 and flexural strength not less than 46 N/mm ² , in floors over cm 1:4 mix, 20mm thick and jointed in neat cement slurry and pointed in white or coloured cement.	3500.00	Sqm	914.00	3199000.00
5	NSR	Supplying and laying of Ceramic wall tiles (Kajaria / Bonzer /Euro or equivalent) of size 300mmx600mm and to a thickness of 10 mm in vertical surfaces for dadoing toilets with water absorptions less than 0.05% conforming to ISO 10545 part 3 and flexural strength not less than 46 N/mm ² , over CM 1:3 mix 12mm thick and jointed in neat cement slurry, pointed in white or coloured cement	4500.00	Sqm	1238.00	5571000.00
6	NSR	Diluting and injecting chemical emulsion for PRE- CONSTRUCTIONAL ANTI-termite treatment and creating a continuous chemical barrier under and around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surroundings of pipes and conduits etc. complete as per specifications - chlorpyriphos emulsifiable concentrate 20 % with 1.0% concentration as per IS. 6313.	9838.00	Sqm	310.39	3053616.82
7	NSR	Brick work flyash cement brick of class designation 75 Above plinth level.Cement mortar 1:6 (1 cement: 6 coarse sand).	7840.01	Cum	3589.32	28140304.69
8	NSR	Half Brick work flyash cement. brick of class designation 75 in cement mortar 1:4 (1cement:4 sand) including scaffolding and curing etc complete as per specification. in superstructure above plinth level upto floor five level. cement mortar 1:4 (1 cement : 4 sand).	4138.01	Sqm	378.41	1565864.36
9	NSR	Supplying,fabricating & fixing of Staircase railing with 50mm dia & 3mm thick SS pipe (304 grade) bent to shape and alignment & welded with necessary legs / base plate including all necessary site welding, labour, material, transportation, grinding and polishing etc complete.	35000.00	Kg	906.00	31710000.00

10	NSR	Supplying and laying VC tiles (VelicraftTechnology) in flooring of approved size and shade of KAJARIA/EURO/ASIAN/JOHNSON or equivalent make at all heights laid over cement mortar 20mm thick of proportion 1:4(1 cement : 4 coarse sand) tile adhesive of requisite thickness (Bal Endura/Laticrete/Fosroc). The joints shall be filled with cement slurry mixed with required pigment to match the colour of tile including cost includes all labour, material, Tool plants, curing etc., complete in all respect as per direction of Engineer.	1875.00	Sqm	1304.00	2445000.00
11	NSR	Suppling & fixing PVC corner beading for toilets as per standard specification.	100.00	Rm	136.00	13600.00
12		Poly Carbonate Sheet Roofing				
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
	NSR	Providing and fixing 10 mm thick Multi wall compact polycarbonate sheet for sky light in the roof including scaffolding arrangements,all labour for placing and fixing in position by using self tapping screws ,rubber beadings,silicon sealant,but excluding the cost of steel member as per design etc. complete	224.00	Sqm	3200.00	716800.00
13	NSR	Providing and fixing of acoustic wall paneling frames made of 50mm G.I floor channel (1.4kg/12") for top and bottom frames. 48mm GI channel (1.4kg/12") for C/C 600mm vertical frames. 25mm(16kg/cum) glass wool with tissue frames. 25mm(16kg/cum) glass wool with tissue paper for acoustic in fill. finally 600x1200x20mm(400kg/m3 density) fabrica sound soak plane with fabric fixed on the G.I frame with help of H- spline.	620.00	Sqm	3392.00	2103040.00
14	NSR	Providing & fixing Chicken wire mesh of approved quality and manufacturer in between R.C.C and Brickwork as per direction and upto satisfaction of Engineer in charge	1500.00	Sqm	92.57	138855.00
15		ACP				
	NSR	Providing and fixing 4 mm thick aluminium composite panel (of approved colour / shade) for exterior wall cladding all levels and height, fixed in pre size of infill panel including structural sealant etc. with water tight and air-tight system either curved or straight in plan. Panel skins material 0.5 mm thick aluminium sheet (3003 - H16) core material natural polyethylene. The aluminium composite panel to be fixed with extruded aluminium basic frame or CRCA from roll formed sections made of galvanized steel colour coated / powder coated (Base steel as per relevant IS code quality, galvanized as per relevant IS code with zinc of 120 GM / Sq. Rm.) (approx. basic frame weight 6 kg/sqm) angle cleats, rivets, G.I. brackets all as approved using suitable hitli / fisher / anchor bolts on RCC/Structural works including necessary accessories complete in all respects as per shop drawings, specifications and as directed by engineer- in- charge	10.00	Sqm	4643.00	46430.00
		Item includes cost of Aluminium Frame, ACP Panel, Weather Sealant (White / Black colour), Gasket, Foam, Scaffolding, Fixtures all machinerries and all taxes .The above work is to be carried out by a Specialized manufacturer approved by the engineer- in- charge. The cost includes all materials, labour, scaffolding charges, water & electricity charges etc., complete. (For Exterior)				
16	NSR	Providing and fixing Structural Glazing fabricated from roll formed sections made of galvanized steel colour coated / powder coated (Base steel as per relevant IS code quality, galvanized as per relevant IS code with zinc of 120 GM / Sq. Rm.) with total coated thickness of 0.8mm for verticals and with total coated thickness of 0.6mm for horizontals. The glass holding section made of 304 grade stainless steel of 0.6mm thick. G.L Sections are to be used as stiffeners inside the CCS/PC section as per the design requirement. Design calculations are to be made to suit wind pressures as given as relevant IS code. The cost includes all materials such as paint, GI colour coated / powder coated sections, accessories, silicon, 6mm thick toughened reflective glass, labour, scaffolding charges, water & electricity charges etc., complete and as directed by Engineer-in- charge.	2000.00	Sqm	4733.00	9466000.00
17		Anti static Flooring				
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
	NSR	Including first coat (Anti static) AS45 mix uniformly with special roller brushes including laying the copper strips of 25mm wide self adhesive copper tape with conductive adhesive in required grid pattern & connect to earth socket, over which apply second coat of (Anti static) AS45 mix uniformly with special roller brushes and top layer 2mm thick self leveling epoxy (Anti-static) to uniform level using nylon spike roller etc., all as per manufacture's specifications including cost of all materials, labor charges, tools required to complete etc., and as directed by Engineer-in-charge.	117.00	Sqm	1685.00	197145.00

18	NSR	Providing and fixing in true horizontal level Armstrong or equivalent OPTRA Pebble microlook edge ceiling tiles with glass fiber substrate of size 600mmx600mmx15mm having NRC 0.90, Light reflectance of >88% (WT), thermal conductivity k = 0.040 W/m0K, Humidity Resistance of 95% RH, and having Fire Performance CLASS 1 (BS 476). The tile shall have a front facing of white scraped tissue of 180 gsm and 45 gsm formaldehyde free fiber tissue backing and shall be laid on Armstrong grid systems with 15mm wide T - section flanges colour white having rotary stitching on the Main Runner, 1200 mm & 600 mm Cross Tees.				
			1000.00	Sqm	1769.00	1769000.00
19	NSR	Providing rain water border in CM 1:2 of size 25mmx25mm over the plastered surface as per approved pattern.finished well with neat sharp edges by using required cement at all levels and locations,including preparing surfaces,scaffolding, curing and as per drawings, specificationd and as directed by Engineer-in-charge.	2667.00	Rm	64.00	170688.00
20	NSR	Providing and fixing SS Handle 100mm Size	1083.00	Nos	231.00	250173.00
21	NSR	Providing and fixing SS Aldrop of 14x300 mm size.	1083.00	Nos	439.00	475437.00
22	NSR	Providing and fixing SS tower bolt 150mm Size	66.00	Nos	147.00	9702.00
23	NSR	Providing and fixing SS tower bolt 300mm Size	1083.00	Nos	401.00	434283.00
24	NSR	Providing and fixing SS hanging type door stopper.	1068.00	Nos	300.00	320400.00
		TOTAL (NON SCHEDULED ITEM)			(B)	94488947.00
						94488929.00
		COST SUMMARY OF CIVIL WORKS				
		TOTAL (SCHEDULED ITEM)			(A)	504396923.00
		TOTAL (NON SCHEDULED ITEM)			(B)	94488947.00
						505283273.00
		GRAND TOTAL (SCHEDULED + NON SCHEDULED ITEM)				598885870.00
		TOTAL OF SCH-'A' PART-(I) C/O TO GENERAL SUMMARY				598885870.00
						599772202.00
		TOTAL OF SCH-'A' PART - I C/O TO GENERAL SUMMARY				598885870.00
						599772202.00
PROJECT:1000 STUDENTS HOSTEL AT NIT,ROURKELA						
1.2 SCHEDULE-'A' PART - II) PLUMBING WORKS						
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
1.2 SCHEDULE-'A' PART - II) PLUMBING WORKS						
		SANITARY FIXTURES				
1	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.	161.00	Each	2964.10	477220.10
2	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	57.00	Each	4220.80	240585.60
3	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.	156.00	Each	13541.25	2112435.00
4	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.	179.00	Each	1518.60	271829.40
5	17.8	Providing and fixing white vitreous china pedestal for wash basincompletely recessed at the back for the reception of pipes and fittings.	97.00	Each	894.70	86785.90

6	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 :				
	17.10.3	Kitchen sink without drain board 510x1040 mm bowl depth 200 mm	3.00	Each	5640.10	16920.30
7	17.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.	181.00	Each	792.60	143460.60
8	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 550x400 mm	181.00	Each	725.15	131252.15
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
9	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	40mm Dia	180.00	Each	66.45	11961.00
10	17.29	Providing and fixing 100 mm Centrifugally cast spun Iron grating for gully trap.	329.00	Each	24.60	8093.40
11	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	69.00	Each	1211.00	83559.00
12	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.	190.00	Each	341.25	64837.50
13	17.34	Providing and fixing toilet paper holder :				
	17.34.2	Vitreous china	161.00	Each	259.75	41819.75
14	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	425.00	Each	403.30	171402.50
15	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 colour weighing not less than 105 gms	319.00	Each	180.10	57451.90
16	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.	249.00	Each	415.20	103384.80
17	17.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour. Weighing not less than 300 gms.	193.00	Each	452.35	87303.55
		SOIL, WASTE, VENT & RAIN WATER PIPES				
18	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.	1860.00	Per metre	857.30	1594578.00
	17.35.2	75 mm dia.				
	17.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	2520.00	Per metre	744.50	1876140.00
19	17.37	Providing and fixing M.S. holder-bat clamps of approved design to Centrifugally cast spun iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10cm 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	840.00	Each	112.50	94500.00
	17.37.2	For 75 mm dia	460.00	Each	110.15	50669.00
20	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	Centrifugally cast spun iron S&S as per IS - 3989	303.00	Each	353.25	107034.75
	17.38.2	75 mm dia				
	17.38.2.2	Centrifugally cast spun iron S&S as per IS - 3989	303.00	Each	281.15	85188.45
21	17.39	Providing and fixing plain bend of required degree.				
	17.39.1	100 mm				
	17.39.1.2	Centrifugally cast spun iron S&S as per IS : 3989	303.00	Each	296.35	89794.05
	17.39.2	75 mm				
	17.39.2.2	Centrifugally cast spun iron S&S as per IS - 3989	303.00	Each	221.95	67250.85
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
22	17.40	Providing and fixing heel rest sanitary bend				
	17.40.1	100 mm dia				
	17.40.1.2	Centrifugally cast spun iron S&S as per IS - 3989	287.00	Each	342.80	98383.60
	17.40.2	75 mm				
	17.40.2.2	Centrifugally cast spun iron S&S as per IS - 3989	287.00	Each	297.45	85368.15
23	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	Centrifugally cast spun iron S&S as per IS - 3989	293.00	Each	579.75	169866.75
	17.43.2	75x75x75 mm				
	17.43.2.2	Centrifugally cast spun iron S&S as per IS - 3989	293.00	Each	438.00	128334.00

24	17.44	Providing and fixing single equal plain junction of required degree :				
	17.44.1	100x100x100 mm				
	17.44.1.2	Centrifugally cast spun iron S&S as per IS - 3989	293.00	Each	522.85	153195.05
	17.44.2	75X75X75 mm				
	17.44.2.2	Centrifugally cast spun iron S&S as per IS - 3989	293.00	Each	378.75	110973.75
25	17.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :				
	17.55.1	100 mm				
	17.55.1.2	Centrifugally cast spun iron S&S as per IS - 3989	293.00	Each	469.40	137534.20
	17.55.2	75 mm				
	17.55.2.2	Centrifugally cast spun iron S&S as per IS - 3989	293.00	Each	333.45	97700.85
26	17.56	Providing and fixing terminal guard:				
	17.56.1	100 mm				
	17.56.1.2	Centrifugally cast spun iron S&S as per IS - 3989	100.00	Each	244.10	24410.00
	17.56.2	75 mm				
	17.56.2.2	Centrifugally cast spun iron S&S as per IS - 3989	28.00	Each	221.95	6214.60
27	17.57	Providing and fixing collar:				
	17.57.1	100 mm				
	17.57.1.2	Centrifugally cast spun iron S&S as per IS - 3989	1125.00	Each	238.25	268031.25
	17.57.2	75 mm				
	17.57.2.2	Centrifugally cast spun iron S&S as per IS - 3989	1616.00	Each	169.65	274154.40
28	17.58	Providing lead caulked joints to centrifugally cast (spun) iron pipes and fittings of diameter:				
	17.58.1	100 mm	1688.00	Each	207.85	350850.80
	17.58.2	75 mm	2104.00	Each	176.50	371356.00
29	17.59	Providing and fixing M.S. stays and clamps for centrifugally cast (spun) iron pipes of diameter :				
	17.59.1	100 mm	794.00	Each	61.70	48989.80
	17.59.2	75 mm	794.00	Each	52.35	41565.90
30	17.60	Providing and fixing trap of self cleansing design with screwed down orhinged grating with or without vent arm complete, including cost ofcutting 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	690.00	Each	801.70	553173.00
31	17.61	Cutting chases in brick masonry walls for following diameter 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	100 mm dia.	320.00	Per metre	252.10	80672.00
	17.61.2	75 mm dia.	152.00	Per metre	180.40	27420.80
32	17.65	Painting 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	1740.00	Per metre	28.75	50025.00
	17.65.2	75mm diameter pipe	2520.00	Per metre	22.00	55440.00
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
33	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 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.				
	18.8.1	15 mm nominal outer dia Pipes	810.00	Rm	218.65	177106.50
	18.8.2	20 mm nominal outer dia Pipes	810.00	Rm	243.05	196870.50
	18.8.3	25 mm nominal outer dia Pipes	1170.00	Rm	297.95	348601.50
	18.8.4	32 mm nominal outer dia Pipes	1940.00	Rm	358.90	696266.00
		Water Supply				
34	18.10	Providing and fixing G.I. pipes (Medium class) complete with G.I. fittings and clamps, including cutting and making good the walls etc.o Internal work				
	18.10.1	15 mm dia. nominal bore	1160.00	Rm	161.60	187456.00
	18.10.2	20 mm dia. nominal bore	940.00	Rm	188.05	176767.00
	18.10.3	25 mm dia. nominal bore	1780.00	Rm	243.15	432807.00
	18.10.4	32 mm dia. nominal bore	3340.00	Rm	296.50	990310.00
	18.10.5	40 mm dia. nominal bore	1100.00	Rm	364.10	400510.00
	18.10.6	50 mm dia. nominal bore	780.00	Rm	453.65	353847.00
35	18.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall				
	18.11.1	15 mm dia nominal bore	1160.00	Rm	229.10	265756.00
	18.11.2	20 mm dia nominal bore	940.00	Rm	251.30	236222.00
36	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.				
	18.12.7	65 mm dia. nominal bore	910.00	Rm	453.55	412730.50
37	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	464.00	Each	277.35	128690.40
38	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	66.00	Each	372.95	24614.70
	18.17.2	32 mm nominal bore.	164.00	Each	450.90	73947.60
	18.17.3	40 mm nominal bore	64.00	Each	546.05	34947.20

	18.17.4	50 mm nominal bore	64.00	Each	780.60	49958.40
39	18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
	18.18.3	25 mm nominal bore	58.00	Each	421.65	24455.70
40	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	548.00	Each	203.30	111408.40
41	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :				
	18.21.1	300mm length				
	18.21.1.1	15 mm nominal bore	1160.00	Each	51.35	59566.00
	18.21.1.2	20 mm nominal bore	920.00	Each	59.50	54740.00
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
42	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	1160.00	Rm	7.35	8526.00
	18.38.2	20 mm diameter pipe	870.00	Rm	8.65	7525.50
	18.38.3	25 mm diameter pipe	1420.00	Rm	11.40	16188.00
	18.38.4	32 mm diameter pipe	3280.00	Rm	13.45	44116.00
	18.38.5	40 mm diameter pipe	960.00	Rm	16.00	15360.00
	18.38.6	50 mm diameter pipe	880.00	Rm	18.80	16544.00
43	18.48	Providing and placing on terrace (at all floor levels) polyethylenewater 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	69000.00	Per litre	6.10	420900.00
44	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.	191.00	Each	130.10	24849.10
	18.54.3	15 mm nominal bore, 165mm long. Weighing not less than 110 gms.	179.00	Each	199.80	35764.20
45	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 gms.	362.00	Each	214.90	77793.80
46	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 gms.	191.00	Each	202.25	38629.75
47	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.	177.00	Each	106.85	18912.45
48	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.	620.00	Each	50.15	31093.00
49	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.				
	18.62.3	25 mm nominal bore, 152mm long. Weighing not less than 440 gms.	91.00	Each	543.65	49472.15
50	18.64	Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms	87.00	Each	112.75	9809.25
51	18.74	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour.				
	18.74.1	15 mm nominal bore with 30cm length.	1124.00	Each	59.50	66878.00
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
52	18.76	Cutting holes up to 30x30 cm in walls including making good the same:				
	18.76.1	With F.P.S. bricks	651.00	Each	152.00	98952.00

53	18.77	Cutting holes up to 15x15cm 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.	311.00	Each	143.95	44768.45
		Total for DSR Items(Sanitary&Water Supply)				17672777.50
		Total for DSR Items(Sanitary&Water Supply)			(A)	17672777.50
		TOTAL FOR NSR ITEMS			(B)	0.00
		TOTAL FOR DSR ITEMS			(A)	17672777.50
		GRAND TOTAL (SCHEDULED + NON SCHEDULED ITEM)				17672777.50
		TOTAL OF SCH-'A' PART-(II) C/O TO GENERAL SUMMARY				17672777.50
PROJECT:1000 STUDENTS HOSTEL AT NIT,ROURKELA						
PART-IV (FIRE FIGHTING)-SCHEDULE-A						
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
Non Schedule Items -PART-IV (FIRE FIGHTING)						
FIRE EXTINGUISHERS						
1	NSR	Supplying Portable Fire Extinguisher, Carbon-dioxide type flat base including valves, discharge hose of not less than 10mm dia.1m long& complete in all respects including fill with CO2 gas conforming to IS:15683 filled ratio of not more than 0.667 of not more than 0667 and wall suspension bracket				
		Water Co2 Type 9.Lt Capacity (IS:15683)	1078.00	Each	2460.00	2651880.00
2	NSR	Providing and fixing of fire buckets(round bottom) -9 litres capacity, initially filled with sand, painted by white inside and red outside with letters "FIRE" in black etc. complete.	105.00	Each	400.00	42000.00
		Sub Total			Sub Total	2693880.00
HOSE REEL						
3	NSR	Supply, fixing, testing & commissioning of 20 mm bore and 30 meter long hose (rubber lined pipe as per IS:444) and hose reel for first aid fire fighting conforming to Is: 884, with 180° full swing drum, fixing brackets, 5 mm dia. Shut off gun metal nozzle, 32 mm dia. hand lever operated ball valve, connecting directly from the riser through 32 mm dia. G.I. pipe with sockets, elbows, nipples, Gate Valve, etc. including providing operating instructions on a metal plate and fixing it near hose reel. The system shall be complete in all respects as per specifications in the drawings and directions of Engineer-in-charge.	91.00	Each	8000.00	728000.00
4	NSR	Providing gun metal ISI marked 63 mm. dia. Instantaneous pattern short branch pipes & 16 mm dia. Nozzle suitable for interconnections to hose pipe coupling as required.	91.00	Each	1485.00	135135.00
5	NSR	Providing ISI marked RRL(IS:636 type-II) fire hose pipe 15 meter long and 63 mm dia with ISI marked (IS:903) gun metal male and female coupling bound and riveted to hose pipes with copper rivets and copper wire complete as required	182.00	Each	3000.00	546000.00
6	NSR	Providing and fixing standard fire hose Box with (800 mm x 600X250 mm) with door suitable to fit in the duct made of not less than 16 SWG MS sheet and angle iron having central opening full fronted glass hinged door (4 mm thick clear glass) including necessary locking arrangement with handle as required including painting (one coat primer and two coats of fire red colour). The door shall be fixed in the masonry wall or as required. The words "FIRE HOSE" to be painted on the box	93.00	Each	10000.00	930000.00
7	NSR	Providing and fixing copper strainer at the suction pipes of fire pumps.				
		100 mm dia	9.00	Each	5975.00	53775.00
8	NSR	Supply & installation of 3 way 63mm instantaneous inlet for fire brigade connection and making connection with fire fighting pipe or under ground water tank and fixing inlets with caps and chains in a 4 mm thick glass fronted box (size : 600 x 600 x 450 mm) of 16 SWG MS sheet, fixing it on the ground level on concrete base or on MS anle iron frame, painting with two coats of fire red paints over primer coat, completing the work in all respect as per the directions of the Engineer in-charge.	24.00	Each	11875.00	285000.00
Item No.	DSR Item No.	Description	Total Quantity	Unit	Rate (Rs.)	Amount in (Rs.)
9	NSR	Constructing brick manonary chamber 60 x 60 x 100 cm inside with FPX brick work in cement mortar 1:5(1 cement : 5 fine sand) for sluice valve with S.F.R.C cover and frame (heavy duty HD-20 grade designation), 560 mm internal diameter conforming to IS:12592, total weight of cover and frame to be not less than 182 Kg in cement concrete 1:2:4 mix (1 cement:2coarse sand:4 graded stone aggregate 20mm nominal size) necessary excavation, foundation concrete 1:5:10(1cement 5 fine sand:10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:4 (1 cement : 4 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.	33.00	Each	5170.00	170610.00
10	NSR	Providing and fixing in position M.S pipe flanged sleeves of 600 mm long (heavy class) with M.S puddle flange fabricated out of 6 mm thick MS plate in RCC walls of water tanks / retaining walls during the time of casting the same including hot dipped galvanization after fabrication and painting with two coats of anti corrosive paint over primer.				
		100NB	17.00	Each	1000.00	17000.00

11	NSR	Providing & Fixing 25dia air release valve with suitable fittings etc. complete.	29.00	Each	1750.00	50750.00
		Sub Total			Sub Total	2916270.00
		MANUAL OPERATED ELECTRIC FIRE ALARM (MOEFA)				
12	NSR	Supplying and fixing Manual call point with hammer, break glass and chain	18.00	Each	3800.00	68400.00
13	NSR	Hooter Providing installation testing and commissioning of electronic hooter cum speaker box fabricated from 16SWA CRCA sheet with good quality speaker filled with line matching transformer suitable to deliver speeches and siren complete as per the standard design	60.00	Each	1250.00	75000.00
14	NSR	Supplying & Fixing of electronic Hooter 6W	60.00	Each	650.00	39000.00
		Sub Total				182400.00
		Total Non Schedule Items -PART-V (FIRE FIGHTING)				5792550.00

2916270.00

182400.00

3098670.00

IAL DEVELOPMENT WORKS)**OSTEL AT NIT ROURKELA****-B-Part-(I-B) Civil Work**

Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
2. SCHEDULE - B						
2.1 SCHEDULE-B-Part-(I-B) Civil Work						
Earth Work						
1	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cum	20297.00	129.35	2625416.95
2	2.25	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.	Cum	14049.00	83.80	1177306.20
3	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials.				
	2.26.1	All kinds of soil.	Cum	118.00	34.60	4082.80
	2.26.2	Ordinary or hard rock.	Cum	471.00	62.00	29202.00
Cement Concrete Work						
4	4.1.10	1:5:10 (1 cement: 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	Cum	25.62	3357.40	86016.59
5	4.2	Providing and laying cement concrete in Retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc up to floor five level, excluding the cost of centering shuttering and finishing:				
	4.2.6	1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 40mm nominal size)	Cum	300.00	4646.55	1393965.00
6	4.2	Providing and laying cement concrete in Retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc up to floor five level, excluding the cost of centering shuttering and finishing:				
	4.2.2	1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20mm nominal size)	Cum	900.00	5663.30	5096970.00
Reinforced Cement Concrete Work						
7	4.3	Centering shuttering including strutting, propping etc. and removal of form work for .				
	4.3.1	Foundations, Footings, Bases for columns	Sqm	1500.00	166.90	250350.00
8	4.3	Centering shuttering including strutting, propping etc. and removal of form work for .				
	4.3.2	Retaining walls ,Return walls, walls (any thickness) including attached pilasters ,buttresses, plinth and string courses fillets etc.	Sqm	2400.00	285.15	684360.00
9	4.4	Providing and laying cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centering , shuttering and finishing.				
	4.4.1	1:2:4 (1 Cement: 2 coarse sand: 4 graded stone aggregate 40mm nominal size)	Cum	50.00	4514.05	225702.50
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
10	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	Sqm	560.00	166.90	93464.00
11	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content work, using cement concrete as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering ,finishing 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. (Note: Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately)				
	5.33.1	All works up to Plinth level.	Cum	400.00	5242.15	2096860.00

12	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Upto plinth level.				
	5.22.6	Thermo-Mechanically Treated bars.	Kg	65000.00	62.25	4046250.00
		FINISHING WORK				
13	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.	Sqm	500.00	198.25	99125.00
		Roofing Works				
14	12.41	Providing and fixing on wall face unplasticised Rigid PVC rain waterpipes conforming to IS : 13592 Type A, including jointing with sealring conforming to IS : 5382, leaving 10 mm gap for thermal expansion,(i) Single socketed pipes.				
	12.41.1	75 mm diameter for Ventilating pipe	Rm	4.00	124.90	499.60
	12.41.2	110 mm diameter	Rm	16.00	206.90	3310.40
15	12.42	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.				
	12.42.4	Single tee without door				
		110x110x110 mm	Each	21.00	241.65	5074.65
		Disposal				
16	15.60	Disposal of building rubbish / malba /similar unserviceable,dismantled or waste material by mechanical means ,including loading,transporting,unloading to approved to municipal dumping ground or as approved by Engineer incharge,beyond 50m initial lead,for all leads including all lifts involved.	Cum	700.00	101.75	71225.00
		Road Work				
17	16.78	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.				
	16.78.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	Cum	3000.00	1940.80	5822400.00
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
18	16.79	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site,for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	745.00	1960.00	1460200.00
19	16.31	Providing and applying tack coat using bitumen emulsion conforming to IS:8887,using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				
	16.31.2	With Medium Setting Bitumen Emulsion				
	16.31.2.1	On W.B.M/W.M.M @0.4Kg/Sqm	Sqm	10000.00	14.50	145000.00
20	16.31.2.2	On bituminous surface @ 0.25kg /sqm	Sqm	9500.00	9.55	90725.00
21	16.55	Providing and laying bituminous macadam using crushed stone aggregates of specified grading, premixed with bituminous binder ,transported to site by tippers,laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade,level alignment and rolling with smooth wheeled,vibratory and tandem rollers as per specification to achieve desired compaction and density,complete as per specifications and direction of Engineer incharge.				
	16.55.1	50 to 100mm average compacted thickness with bitumen of grade VG-30 @3.5 0% (Percentage by weight of total mix)prepared in batch type Hot Mix Plant of 100-120 TPH Capacity	Cum	300.00	6374.25	1912275.00
22	16.56	Providing and laying Semi Dense -bituminous macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler ,transporting the hot mix to site by tippers,laying with paver finisher equipped with electronic sensor to the required grade,level alignment and rolling with smooth wheeled,vibratory and tandem rollers as per specification to achieve desired compaction and density,complete as per specifications and direction of Engineer incharge.				
	16.56.1	25mm compacted thickness with bitumen of grade VG-30 @5 0% (Percentage by weight of total mix)prepared in batch type Hot Mix Plant of 100-120 TPH Capacity	Sqm	4000.00	208.15	832600.00
		NP2-Pipes				
23	19.6.3	Providing and laying non - pressure NP2 Class (light duty) R.C.C Pipes with collars jointed with stiff mixture in the proportion of 1:2 (1 cement:2 fine sand) including testing of joints etc. complete.	Rmtrs	300.00	422.90	126870.00
a	a	250mm dia pipe				
		WATER PROOFING				

24	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 leveling course (leveling 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 cum/sqm thoroughly embedded in the 2nd layer.	sqm	100.00	732.85	73285.00
		Total Civil Cost DSR Items (A)				28452519.00
		Total Civil Cost DSR Items (A)			(A)	28452519.00
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
2. SCHEDULE- B						
2.1 PART-III-B -NON SCHEDULED ITEMS (CIVIL)						
25		Providing and laying filter media behind abutments, wing walls & return walls with well packed material to the specified thickness with smaller size towards the soil and bigger size towards the wall complete with all leads and lifts as per drawings and Technical Specifications Clauses 305,309,2502 and Clause 710.1.4 of IRC 78.	Cum	300.00	1168.00	350400.00
26		Providing 100mm dia weep holes in abutments, wing walls, retaining walls, return walls etc. complete as per drawings and Technical Specifications Clause 2706.	Rmtrs	180.00	95.00	17100.00
27	NSR	Providing cement concrete (M 20) Chenal kerb including painting of kerbs as per Drawing and MoRT & H Specification Clause 408 and Technical Specification.	Rmtrs	560.00	450.00	252000.00
28		Providing and applying of cementitious crystalline based water proofing for concrete rafts,wall,water tanks,concrete floors,Positive & Negative Sides of the Retaining Wall etc. with crystal T1/T2 system. The application to be done from - ve (negative) / +ve (positive)side on a wet open pore concrete surface with brush @ 0.8 Kg of crystal T2 as per manufacture specification. including making grooves of 10 x 15 mm size on the construction joints and treating with crystal T1:1 part of clear water as per manufactures specification etc. and as per direction of engineer - in - charges. The rate also includes the clearing of surface to be treated with air compressor wherever required.	Sqm	450.00	723.00	325350.00
		TOTAL Non Schedule Items			(B)	944850.00
		TOTAL (SCHEDULED ITEM)			(A)	28452519.00
		GRAND TOTAL (SCHEDULED + NON SCHEDULED ITEM)				29397369.00
		TOTAL OF SCHEDULED - B (PART I) C/O TO GENERAL SUMMARY				29397369.00

28452535.69
28452535.69

944850.00
28452535.69
29397385.688
29397385.688

NATIONAL INSTITUTE OF TECHNOLOGY						
1000 BEDDED HOSTEL ELECTRICAL CONSOLIDATED ESTIMATE						
1.3 PART-III- SCHEDULE-A-INTERNAL ELECTRICAL WORK-DSR ITEMS						
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				
1	1.8.3 Group B	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 medium class PVC conduit with piano type switch, phenolic laminated sheet , suitable size MS box and earthing the Point with 1.5 sqmm FR PVC insulated copper conductor single core cable as required.	4079.00	Point	499.00	2035421.00
2	1.9	Wiring for twin control light Point with 1.5 sq mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit with 2way piano type switch,phenolic laminated plate,suitable size MS box and earthing the Point with 1.5 sqmm FR PVC insulated copper conductor single core cable as required.	146.00	Point	625.00	91250.00
3	1.12	Wiring for light /power plug with 2 runs of 4 sqmm FR PVC insulated copper conductor single core in recessed PVC conduit along with 1 no of 4 sq mm FR PVC insulated copper	4504.00	Per metre	162.00	729648.00
4	1.14.2	Wiring for circuit/submain wiring 2 runs of 2.5 sqmm FR PVC insulated copper conductor single core in recessed PVC conduit along with 1 no of 2.5 sq mm FR PVC insulated	27493.00	Per metre	131.00	3601583.00
5	1.14	Wiring for circuit/submain wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required (LDB,PDB&ELDB)				
	1.14.9	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	450.00	Per metre	358.00	161100.00
	1.14.10	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	3944.00	Per metre	562.00	2216528.00
6	1.21	Supply and fixing of following size of PVC conduit along with accessories in recessed including cutting the wall & making good the same in case of recessed conduit as required.				

	1.21.1	20 mm	600.00	Per metre	56.50	33900.00
	1.21.2	25 mm	686.00	Per metre	64.50	44247.00
	1.21.3	32 mm	4790.00	Per metre	80.50	385595.00
7	1.23.1+1.2 3.4	supply and fixing 5/6A Piano type switch and 3pin 5/6 amp Piano type socket outlet on the existing lighting switch box/cover including connection etc as required.	1165.00	Each	65.00	75725.00
8	1.23.1+1.2 3.4+1.22.5	supply and fixing suitable size of metal box with phenolic laminated sheet and cover in front in recess, including providing and fixing of 2 Nos of 3pin 5/6amps piano type socket outlet and 5/6amps piano switch connection etc as required.	1098.00	Each	238.00	261324.00
9	1.23.1+1.2 3.4+1.22.2	supply and fixing suitable size of metal box with phenolic laminated sheet and cover in front in recess, including providing and fixing of 1 No of 3pin 5/6amps piano socket outlet and 5/6amps piano switch connection etc as required.	78.00	Each	151.50	11817.00
10	1.23.3 + 1.23.5 + 1.22.2	Supplying and fixing suitable size metal box with phenolic laminated sheet and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps Piano type socket outlet and 15/16 amps piano type switch, connection etc as required.	209.00	Each	221.00	46189.00
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				
11	2.2	Supplying and fixing 30 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 amps "C" curve, TPMCB in sheet steel enclosure, on surface in recess with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	40.00	Each	1983.00	79320.00
12	1.23.7+ 1.22.1	supply & fixing suitable size of metal box with piano TV Antenna socket, plate and cover in front, in recessed in wall including connection etc as required.	78.00	Each	112.00	8736.00
12(i)	1.23.6+1.2 2.1	supply & fixing suitable size of GI box with Piano Telephone socket, plate and cover in front, in recessed in wall including connection etc as required.	4.00	Each	120.50	482.00
13	1.22	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required.(For Data)				
	1.22.1	75mm X 75mm X 60mm deep	1098.00	Each	72.00	79056.00
14		EARTHING & LIGHTNING(DSR)				
		P/F M.V. danger notice plate				
	2.21	Providing and fixing MV danger notice plate of 200 mm x 150 mm made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on FRONT side as required.	32.00	Each	121.00	3872.00
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				
		G.I. Earth plate Electrode:				
	5.3	Earthing with G.I. earth plate 600 mm x 600 mm x 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal or coke and salt) as required. (Panel body earth- 2 nos, Lightning arrestor- 2 nos)	32.00	Set	3063.00	98016.00
	5.2	Earthing with GI earth pipe 2.5 mtrs long 40mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and required quantity of salt and charcoal filling as per IS 3043/1986	32.00	Each	3385.00	108320.00
		P/F 25 mm X 5 mm G.I. earth strip in surface/ recess:				
	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in	400.00	Meter	120.00	48000.00
		P/F 6 SWG G.I. loop earthing wire in sur/rec: (body earthing of DBs)				
	5.16	Providing and fixing 6 SWG G.I. wire on surface or in recess for loop earthing as required.	2000.00	Meter	30.00	60000.00
		P/F G.I. lightning conductor finial:				
	6.2	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc, complete as required.	16.00	Each	701.00	11216.00
	6.7	Providing and fixing G.I. tape 20 mm x 3 mm thick on parapet of surface of wall for lightning conductor complete as required. (for horizontal run)	2544.00	Meter	58.00	147552.00
	6.8	Providing and fixing G.I. tape 20 mm x 3 mm thick on parapet of surface of wall for lightning conductor complete as required. (for vertical run)	320.00	Meter	81.50	26080.00
	6.12	Providing and fixing testing joint made of 20 mm x 3 mm thick G.I. strip, 125 mm long with 4 nos. of G.I. bolts nuts check nuts and spring washers etc, complete as required.	16.00	Each	58.50	936.00
15	2.4	DISTRIBUTION BOARD:Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution Board, 415 volts, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required				
	2.4.4	i. 4 way (4+12). Double door	57.00	Each	1654.00	94278.00
	2.4.5	ii. 6 way (4+18). Double door.	59.00	Each	2047.00	120773.00
	2.4.6	iii. 8 way (8+24). Double door.	6.00	Each	2529.00	15174.00
16	2.2	Providing and fixing following rating and breaking capacity MCCB in existing panel board including drilling holes in panel, making connections, etc. as required.				
	2.2.1	100 Amp, 16KA	14.00	Each	2801.00	39214.00
	2.2.5	200 Amp, 25KA	6.00	Each	7290.00	43740.00

17	2.13	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.13.1	40 amps	150.00	Each	554.00	83100.00
	2.13.2	63 amps	10.00	Each	563.00	5630.00
18	2.13+2.15	RCBO (MCB+RCCB): Supplyin and fixing following rating four pole (three phase and neutral), 415 volts, residual circuit breaker with Overload (RCBO), having a sensitivity current upto 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required				
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				
	2.13.2+2.15.3	63 amps	6.00	Each	2528.00	15168.00
19	2.15	ELCB (or) RCCB: Supplyin and fixing following rating four pole (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required				
	2.15.2	40 amps	108.00	Each	1703.00	183924.00
	2.15.1	25 amps	8.00	Each	1679.00	13432.00
20	2.1	MCB : Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.10.1	Single Pole	390.00	Each	141.00	54990.00
	2.10.3	Double Pole	72.00	Each	379.00	27288.00
	2.10.5	Triple Pole	12.00	Each	562.00	6744.00
21	9.1 9.1.36	Supply and making end termination with brass compression gland and aluminum lugs for for following size of PVC insulated and PVC sheathed/XLPE aluminum conductor cable of 1.1 KV grade as required.				
		4C x 50 sq mm alu arm cable	12.00	Each	265.00	3180.00
22	7.6	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV Grade of following size in the existing masonry.				
	7.6.2	4C x 50 sq mm alu arm cable	100.00	Per meter	15.00	1500.00
		TOTAL PART-II (A) - INTERNAL ELECTRICAL WORK - DSR ITEMS	56864.00			11074048.00
		TOTAL PART-II (A) - INTERNAL ELECTRICAL WORK - DSR ITEMS	66024.79			11074048.00
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				
		INTERNAL ELECTRICAL WORK - NSR ITEMS				
23	NSR	Supplying of factory assembled Industrial batten box/batten type surface mounting on wall or ceiling lighting fixture, similar to PHILIPS TMS 122 M 1X TL528W EBT with 1 no 28 watts T5 lamps.	2640.00	Each	1140.00	3009600.00
24	NSR	Supply and fixing of 11W CFL lamp s Philips or Equivalent with Batton Holder.	394.00	Each	213.00	83922.00
25	NSR	supply and fixing of 36w FLT (T5) street light fitting glass cover,Philips Make Cats cat log no HGS120 1xTL-D36W IC or Equivalent	12.00	Each	1512.00	18144.00
26	NSR	Supplying of factory assembled Industrial batten box/batten type surface mounting on wall or ceiling lighting fixture, similar to PHILIPS TMS 122 M 2X TL528W EBT with 2 no 28 watts T5 lamps.	219.00	Each	1450.00	317550.00
27	NSR	Supplying of factory assembled Industrial batten box/batten type surface mounting on wall or ceiling lighting fixture, similar to PHILIPS TMS 122 M 2X TL554W EBT with 2 no 54 watts T5 lamps.	30.00	Each	1916.00	57480.00
28	NSR	Supplying, installation, testing and commissioning of following size special design energy saving ceiling fans along with fan hook similar to Bajaj ES-50/cromptons or equivalent with low power consumption as specified below aluminum motor covers of larger diameters complete with double ball bearings, Aluminium blades, down rod, shackle insulator, canopy but without regulator etc complete as required supply and fixing of 1200mm sweep ceiling fan	1549.00	Each	1692.00	2620908.00
29	NSR	supply and fixing piano stepped type electronic fan regulator on the existing switch box including connection and cover plate	1549.00	Each	207.00	320643.00
30	NSR	supply and fixing of 300mm dia exhaust fan with double ball bearing and dmetallic blade	171.00	Each	1536.00	262656.00
31	NSR	MCB : Supplying and fixing 0.5 amps to 6 amps rating, 240/415 volts, "D" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.	0.00			
		i. Single Pole	1356.00	Each	318.00	431208.00
32	NSR	Supply and Laying of following size of PVC insulated and PVC sheathed/XL PE aluminum conductor cable of 1.1 KV 4C x 50 sq mm alu arm cable	100.00	Each	616.00	61600.00
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				

11074048.00

11074048.00

33	NSR	supply and erection of powder coated floor mounting LSB-A1 panel made of 1.6mm thick CRCA sheet steel dust and vermin proof encloser with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic digital meter for measuring KWh with necessary CT's,3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	4.00	Each	70437.50	281750.00
		i) 200A TPN MCCB 25KA -1 no				
		ii) 100A TPN MCCB 16KA -1 no				
		iii) 63A TPN MCB -1 no				
		iii) 40A TPN MCB -10 nos				
33(i)	NSR	supply and erection of powder coated floor mounting LSB panel made of 1.6mm thick CRCA sheet steel dust and vermin proof encloser with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic digital meter for measuring KWh with necessary CT's,3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	2.00	Each	73071.00	146142.00
		i) 200A TPN MCCB 25KA -1 no				
		ii) 100A TPN MCCB 16KA -1 no				
		iii) 63A TPN MCB -1 no				
		iv) 40A TPN MCB -12 nos				
33(ii)	NSR	supply and erection of powder coated floor mounting LSB panel made of 1.6mm thick CRCA sheet steel dust and vermin proof encloser with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic digital meter for measuring KWh with necessary CT's,3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	1.00	Each	52745.00	52745.00
		i) 100A TPN MCCB 16KA -1 no				
		ii) 40A TPN MCB -8 nos				
33(iii)		supply and erection of powder coated floor mounting LSB panel made of 1.6mm thick CRCA sheet steel dust and vermin proof encloser with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic digital meter for measuring KWh with necessary CT's,3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	1.00	Each	50111.00	50111.00
		i) 100A TPN MCCB 16KA -1 no				
		ii) 40A TPN MCB -6 nos				
34	NSR	supply and erection of powder coated floor mounting LSB panel made of 1.6mm thick CRCA sheet steel dust and vermin proof encloser with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic digital meter for measuring KWh with necessary CT's,3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	6.00	Each	62537.00	375222.00
		i) 100A TPN MCCB 16KA -1 no				
		ii) 40A TPN MCB -12 nos				
Item No.	DSR Item No.	Description	Total Qty	Unit	Rate (Rs.)	Amount (Rs.)
		PART-III - INTERNAL ELECTRICAL WORK - DSR ITEMS				
34(i)	NSR	supply and erection of powder coated floor mounting 3PHASE DB panel made of 1.6mm thick CRCA sheet steel dust and vermin proof encloser with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic digital meter for measuring KWh with necessary CT's,3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	2.00	Each	59329.00	118658.00
		i) 125A TPN MCCB 16KA -1 no				
		ii) 63A 4P MCB -2nos				
		ii) 32A TP MCB -8 nos				
35	NSR	Supplying, terminating, testing and commissioning of End termination and connection of FRLS aluminium / copper conductor armored UG cable including supply of single compression, type tinned brass cable glands, suitable size tinned copper crimping type lugs, including gland earthing as required.				
		i) 4 Core 6 Sq.mm. 1.1 KV gr. copper cable	16.00	Each	287.00	4592.00
		i) 4 Core 10 Sq.mm. 1.1 KV gr. copper cable	228.00	Each	300.00	68400.00
35(i)		Supplying and laying of Single run of CAT -6 Telephone cable in the existing conduit. As per the manufacturer specification and as per the direction of engineer in charge	96.00	Per metre	45.00	4320.00
36	NSR	Safety equipments:				
		supply and delivery of the following safety equipments with allied material as required by the statutory authority like CEIG	8.00	Set	20000.00	160000.00
		a) 10 kg capacity DCP type fire extinguisher -2 nos				
		b) Fire bucket stand with 4nos round bottom fire bucket - 1sets				
		c) First aid box small size -1set				
		d) first aid resuscitation chart laminated both in local language and english -1 sets				
		TOTAL NON SCHEDULE ITEM (B)				8445651.00
		TOTAL SCHEDULE ITEM (A)				11074048.00
		TOTAL SCHEDULE ITEM(A) + NON SCHEDULE ITEM(B)				19519699.00

8445651.00
11074048.00
19519699.00

		SUMMARY OF PART-III -INTERNAL ELECTRICAL SCHEDULED & NON SCHEDULED ITEMS				19519699.00

19519699.00

NATIONAL INSTITUTE OF TECHNOLOGY						
SCHEDULE-B						
2.3 External Electrical Works DSR Items - Part- III						
Item No	DSR code	Description	Unit	Qty	Rate	Amount Rs.
		SCHEDULE-B				
		2.3 External Electrical Works DSR Items - Part- III				
		MV CABLES LAYING				
		Laying of one number PVC insulated and PVC sheathed /XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.				
	7.1					
	7.1.4	i) 3.5C x 300 sq mm alu arm cable	RM	1000	94	94000.00
	7.1.2	ii) 4C x 70 sq mm alu arm cable	RM	410	72	29520.00
	7.1.1	iii) 4C x 35 sq mm alu arm cable	RM	420	66	27720.00
1	7.1.1	iv) 4C x 25 sq mm alu arm cable	RM	30	66	1980.00
	9.1	Supply and making end termination with brass compression gland and aluminum lugs for following size of PVC insulated and PVC sheathed/XLPE aluminum conductor cable of 1.1 KV grade as required.				
	9.1.30	i) 3.5C x 300 sq mm alu arm cable	Each	8	867	6936.00
	9.1.23	ii) 4C x 70 sq mm alu arm cable	Each	12	297	3564.00
	9.1.35	iii) 4C x 35 sq mm alu arm cable	Each	8	224	1792.00
	9.1.34	iv) 4C x 25 sq mm alu arm cable	Each	2	192	384.00
2	9.1.32	v) 4C x 10 sq mm copper arm cable	Each	4	146	584.00
3	2.2	Providing and fixing following rating and breaking capacity MCCB in existing panel board including drilling holes in panel, making connection etc as required.				
	2.2.9	i) 400 Amp 4P, 35KA	Each	2	16605	33210.00
	2.2.5	ii) 200 Amp 4P, 25KA	Each	12	7290	87480.00
	2.2.1	iii) 100 Amp 4P, 16KA	Each	2	2801	5602.00
4	2.1	Supply and fixing 5 amps to 32 amps rating, 240/415 volts "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.10.5	i) Triple Pole and Neutral	Each	8	723	5784.00
5	2.13	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections testing and commissioning etc. as required.				
	2.13.2	i) 63 Amp	Each	5	563	2815.00
6	2.4	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator).				
	2.4.1	i) 4 Way (4+12), Single Door	Each	1	1230	1230.00
		Total External Electrical Cost DSR Items (A)				302171.00
		Total External Electrical DSR Items - Part-II-B				302171.00
PART-III External Electrical Works NSR Items						
7	NSR	supply and erection of powder coated floor mounting DB-1 panel made of 1.6mm thick CRCA sheet steel dust and vermin proof enclosure with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic meter for measuring KWh with necessary CT's, 3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	each	1	78338	78338.00
		i) 400A 4P MCCB 35KA -1 no				
		ii) 200A 4P MCCB 25KA -5nos				
		iii) 100A 4P MCCB 16KA -1no				

302601.00
302601.00

8	NSR	supply and erection of powder coated floor mounting DB-2 panel made of 1.6mm thick CRCA sheet steel dust and vermin proof enclosure with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic meter for measuring KWh with necessary CT's, 3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	each	1	82288	82288.00
		i) 400A 4P MCCB 35KA -1 no				
		ii) 200A 4P MCCB 25KA -7nos				
9	NSR	supply and erection of powder coated floor mounting LSB-9 panel made of 1.6mm thick CRCA sheet steel dust and vermin proof enclosure with suitable size of aluminium bus bar for main and interconnecting switchgear, Electronic meter for measuring KWh with necessary CT's, 3 phase indication lamp and earthing as per requirement of CEIG and IE regulation. For the provision of following rated switchgear in the panel	each	1	50686	50686.00
		i) 100A 4P MCCB 16KA -1no				
		ii) 63A 4P MCB -3nos				
10	NSR	MV CABLES Supply and Laying following size of 1.1KV grade UG arm cable on trench as per IS standard [Make: Polycab]				
		i) 4C x 10 sq mm copper arm cable	RM	300	523	156900.00
		ii) 4C x 6 sq mm copper arm cable	RM	2000	339	678000.00
Item No	DSR code	Description	Unit	Qty	Rate	Amount Rs.
11	NSR	Supplying, terminating, testing and commissioning of End termination and connection of XLPE (FRLS) aluminium / copper conductor armored UG cable including supply of single compression, type tinned brass cable glands, suitable size tinned copper crimping type lugs, including gland earthing as required.				
		i) 4C x 6 sq mm copper arm cable	Each	126	137	17262.00
12	NSR	Supply of following size of 1.1KV grade UG arm cable on trench as per IS standard [Make: Polycab]				
		i) 3.5 x 300 sq mm alu arm cable	RM	1000	1408	1408000.00
		ii) 4C x 70 sq mm alu arm cable	RM	410	404	165640.00
		iii) 4C x 35 sq mm alu arm cable	RM	420	228	95760.00
		iv) 4C x 25 sq mm alu arm cable	RM	30	179	5370.00
13	NSR	STREET LIGHT Street light DB with timer controller Supply, erection, testing and commissioning of outdoor type Street light Distribution feeder pillar with 14 SWG CRCA plain black sheet steel enclosure to accommodate 4 way TPN MCB DB for street light power distribution and one no of 24 hrs timer with 63A power contactor for automatic ON/OFF of street light. For the provision of following rated switchgear in the panel	Each	2	17239	34478.00
		i) 63A 4P MCB - 1No				
		ii) 32A TPN MCB - 4Nos				
14	NSR	Supply, delivery & installation of 7m long octagonal GI Pole made out of 3mm thick galvanized sheets (both inner and outer surface being galvanized) with bottom dia of 150mm, top dia of 76mm similar to bajaj type BOP-7030 or equivalent with a foundation base plate of size 240x240x20mm and 4nos. 20mm dia anchor bolts duly embedded in 1:2:4 P.C.C including excavation of pit, concreting providing PVC pipes of cable entry, providing junction box with 6amp SP MCB loop in loop out arrangement terminal block wiring with 3core 1.5sq.mm PVC insulated copper wire from junction box upto the fitting and with a bracket of 1500 mm as required as per direction of Engineer in charge.	Each	28	12731	356468.00
15	NSR	Supply, delivery & installation of 4m long octagonal GI Pole made out of 3mm thick galvanized sheets (both inner and outer surface being galvanized) with bottom dia of 150mm, top dia of 76mm similar to bajaj type BOP-4030 or equivalent with a foundation base plate of size 240x240x20mm and 4nos. 20mm dia anchor bolts duly embedded in 1:2:4 P.C.C including excavation of pit, concreting providing PVC pipes of cable entry, providing junction box with 6amp SP MCB loop in loop out arrangement terminal block wiring with 3core 1.5sq.mm PVC insulated copper wire from junction box upto the fitting and with a bracket of 1500 mm as required as per direction of Engineer in charge.	Each	35	7763.00	271705.00
Item No	DSR code	Description	Unit	Qty	Rate	Amount Rs.
16		Green line smart 24W LED Street Light with high efficiency Lumen and dust Resistant Protection (IP 65) Class I type Philips Make : BRP 020 1 X 10LED-SI HP/CW PSU RR	Each	35	4916	172060.00
17		Green line smart 90W LED Street Light with high efficiency Lumen and dust Resistant Protection (IP 65) Class I type Philips Make : BRP 020 2 X 24LED- HP/CW PSU GR	Each	28	21994	615832.00

18	NSR	Preparing and obtaining the approval from CEIG to carryout electrical installation and duly submitting the drawing for approval including necessary inspection fees for inspection and obtaining Safety certificate for entire new installation	1	LS	100000		100000.00
		Total External Electrical Cost DSR Items (B)					4288787.00
		Total External Electrical Cost DSR Items (A)					302171.00
		GRAND TOTAL (SCHEDULED + NON SCHEDULED ITEM)					4590958.00
		TOTAL OF SCHEDULED-B (PART III) C/O TO GENERAL SUMMARY					4590958.00
2 Schedule-B (EXTERNAL DEVELOPMENT WORKS)							
1000 STUDENTS HOSTEL AT NIT ROURKELA							
2.2 Schedule-B							
EXTERNAL WATER SUPPLY AND SANITARY WORK - Part II							
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)	
2. SCHEDULE - B							
2.2 Schedule-B							
EXTERNAL WATER SUPPLY AND SANITARY WORK - Part II							
1	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 includes jointing of pipes & fittings with one step CPVC solvent cement ,trenching ,refilling & testing of joints complete as per direction of Engineer in Charge.					
	18.9.3	25 mm nominal outer dia .Pipes	Rm	100.00	185.15	18515.00	
	18.9.5	40 mm nominal outer dia .Pipes.	Rm	175.00	309.60	54180.00	
	18.9.6.	50mm nominal inner dia .Pipes	Rm	240.00	475.70	114168.00	
	18.9.7	62.50 mm nominal inner dia Pipes.	Rm	250.00	1326.35	331587.50	
	18.9.8.	75mm nominal inner dia .Pipes	Rm	1750.00	1854.85	3245987.50	
2	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.					
	18.12.3	25 mm dia nominal bore	Rm	100.00	209.40	20940.00	
	18.12.4	32 mm dia nominal bore	Rm	100.00	248.55	24855.00	
	18.12.5	40 mm dia nominal bore	Rm	250.00	294.20	73550.00	
	18.12.6	50 mm dia nominal bore	Rm	350.00	355.95	124582.50	
	18.12.7	65 mm dia nominal bore	Rm	600.00	453.55	272130.00	
	18.12.8	80 mm dia nominal bore	Rm	550.00	573.40	315370.00	
3	18.17.	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :					
	18.17.5	65 mm dia nominal bore	Each	40.00	1073.25	42930.00	
	18.17.6.	80mm nominal bore	Each	35.00	1832.95	64153.25	
4	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	Each	15.00	936.35	14045.25	
	18.19.4.2	Vertical	Each	25.00	1110.55	27763.75	
	18.19.6.	80 mm nominal bore					
	18.19.6.1.	Horizontal	Each	25.00	2392.95	59823.75	
	18.19.6.2.	Vertical	Each	10.00	3089.85	30898.50	
5	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse 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) , i/c 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 :					
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)	
	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	15.00	5392.90	80893.50	
6	18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse 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) , i/c 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 common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	15.00	9277.10	139156.50	

4288787.00
302601.00
4591388.00
4591388.00

7	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	50 mm nominal bore	Each	5.00	4018.15	20090.75
	18.59.2	80 mm nominal bore	Each	5.00	5830.10	29150.50
8	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	Rm	450.00	840.25	378112.50
9	19.1	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete				
	19.1.1	100 mm diameter	Rm	250.00	150.10	37525.00
	19.1.2	150 mm diameter	Rm	1200.00	219.05	262860.00
10	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :				
	19.2.1	100 mm diameter	Rm	250.00	496.90	124225.00
	19.2.2	150 mm diameter	Rm	1200.00	607.70	729240.00
11	19.3.	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				
	19.3.1	100 mm diameter	Rm	250.00	236.15	59037.50
	19.3.2	150 mm diameter	Rm	1200.00	382.75	459300.00
12	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 common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	45.00	1256.35	56535.75
	19.4.3	180x150 mm size P type				
	19.4.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	250.00	1365.55	341387.50
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
13	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 diameter	Rm	1600.00	422.90	676640.00
	19.6.5.	500 mm diameter	Rm	1150.00	620.85	713977.50
14	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 common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	22.00	7132.00	156904.00
15	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 common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	23.00	15322.95	352427.85
16	19.8.	Extra for depth for manholes				
	19.8.1	Size 90x80 cm				
	19.8.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Rm	13.00	4061.70	52802.10
17	19.8.	Extra for depth for manholes				
	19.8.2	Size 120x90 cm				
	19.8.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Rm	12.00	4866.75	58401.00

18	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 common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	48.00	12943.40	621283.20
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
	19.11.1.1					
19	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 Sewer bricks conforming IS : 4885	Rm	40.00	4522.30	180892.00
20	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 common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	65.00	26873.70	1746790.50
21	19.14	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m				
	19.14.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Rm	45.00	10643.40	478953.00
22	19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm 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	Each	150.00	256.75	38512.50
23	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 :				
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
	19.30.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	15.00	4556.55	68348.25
24	19.31	Extra for depth beyond 45 cm of brick masonry chamber :				
	19.31.2	For 500x700 mm size				
	19.31.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Rm	25.00	3081.70	77042.50
25	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 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.				
	19.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	4.00	15228.15	60912.60

26	19.33	Constructing soak pit 1.20x1.20x1.20 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	Each	4.00	1591.35	6365.40
		Total External Water Supply & Sanitary Cost DSR Items			(A)	12843247.00
		Total External Water Supply & Sanitary Cost DSR Items (Part -I B)				12843247.00
PART II - EXTERNAL WATER SUPPLY-NSR ITEMS						
1	NSR	Construction of percolation well / rain water harvest pit of 2 m dia and 3m deep with precast RCC rings, covering the top with RCC slab including supply and fixing 600 x 600 RCC MH cover CI / MS rungs etc. The quoted rate shall include earth work excavation, back filling, removing excess earth and making good the floor. The percolation well harvest pit shall be constructed as per the detail drawings and specification shall consists of:	Each	20.00	75000.00	1500000.00
		Alternate layers of brick bats, activated charcoal, gravel, pebbles and topped with fine sand for good infiltration.				
		5 Nos. bore holes of 160 mm dia from the bottom of percolation pit for a depth of 6m, drilled by using auger manually.				
		Bore hole to be filled with medium sized pebbles to provide mechanical strength to the holes and enhance infiltration.				
		Rate quoted shall be inclusive of earth work excavation, back filling, removing of excess earth as per the instructions of engineer - in charge.				
		BORE WELL				
2	NSR	Providing and constructing borewell of 165mm dia & 300Rm depth including providing and fixing PVC casing pipes of approved quality 165mm internal dia including accessories, labour tools and required equipment etc., complete.				
		Identifying the point for drilling the borewell.	Each	1.00	5000.00	5000.00
3		Drilling of 165mm dia average pilot bore by mud slush direct rotary ring in all sorts of soil of as per IS-2800 suitable for 165mm dia bore PVC pipes including carting of rig and other equipments at site etc. complete	Rm	300.00	750.00	225000.00
	NSR	Borewell casing pipe				0.00
4		Providing fixing 160mm dia PVC casing pipes Confirming to IS in borewell to a required depth etc., complete.	Rm	100.00	750.00	75000.00
5	NSR	Testing of water samples, as directed by engineers/consultant	Each	1.00	1500.00	1500.00
6	NSR	Supplying and fixing heavy duty clamp of size 900mmx100mmx15mm with bolts and nuts etc., complete	Pair	4.00	1286.00	5144.00
7	NSR	Providing and fixing top cap of PVC Dummy suitable for 165mm dia nominal bore pipe etc. complete	Each	1.00	600.00	600.00
		Submersible pumpset in tube well				
Item No.	DSR Item No.	Description	Unit	Total Qty	Rate (Rs.)	Amount (Rs.)
8	NSR	Design, supply and installation of submersible pumpsets of 3 phase electric motor frame with coupling guard and it's fasteners, and pumping water from borewell including providing, laying jointing 65mm dia GI pipe "C" class confirmed as per relevant IS code pump shall be installed at a depth of 65m from ground level and delivery pipe shall be left 1.50m above ground level. Rate to include cost of pumpsets, GI pipes with in the borewell, 3 core x 4sqmm electric cable, star delta starter, single phase preventer, dry running preventer, outer door type electrical panel board, start & stop bush button, voltmeter Amper meter, etc., provision for the maintenance of the pumps, chain block with pulley etc. complete. The supplier shall give one year guarantee, complete as specified and directed by Engineers's/consultant.	Each	1.00	163601.00	163601.00
		Make : KSB / Texmo / Kirloskar / Suguna or equivalent				
		HP: Suitable HP for considering the capacity & Head of pumpsets				
		Capacity: 625 lpm				
		Head : 145 m of water column				
		Nominal speed: 2900 rpm				
		Material of construction				
		Body : CI				
		Impeller: Stainless steel				
		Stator : Steel				
		Rotor: Steel				
		Shaft : Stainless steel				
		Centrifugal pumpsets (Submersible, monoblock type) for pumping water from Domestic water collection sump to common over head tank				
		Sewage pumpsets				
9	NSR	Design, supplying, installation, commissioning and testing of submersible pumpsets with 3 phase electric motor (1450 Rpm) for pumping of sewage Containing solids of maximum size 50mm with 100mm dia GI "C" class Pipe from pump to NRV approximately 5m, suitable size electrical cable, starter, single phase preventer, overhead and reverse rotation protection device, oil seal failure, indication sensor, automatic control for on / off switch and outdoor type panel board for housing the starter etc., complete	Each	2.00	52578.00	105156.00
		Make : Suguna, KSB, kirloskar & Texmo or equivalent				
		Capacity: 9.6Lps				
		Head : 20m				
		Material of construction: Pump casing : cast iron Impeller : CF8m				
		Shaft : c-45				
		Total External Water Supply & Sanitary Cost NSR Items			(B)	2081001.00
		Total Schedule Item DSR			(A)	12843247.00
		GRAND TOTAL (SCHEDULED + NON SCHEDULED ITEM)				14924248.00

		TOTAL OF SCHEDULED - B (PART II) C/O TO GENERAL SUMMARY				14924248.00	14924248.00

<u>CONSTRUCTION OF BASEMENT PARKING FOR FACULTY RESIDENCES (PHASE-II) AT N.I.T. ROURKELA</u>			
ABSTRACT OF COST			
	DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
SECTION A	CIVIL WORK (BASEMENT PARKING)	20955658.64	7279907.99
SECTION B	VENTILATION	780504.50	3584770.00
	TOTAL	21736163.14	10864677.99
G.TOTAL		32600841.13	

BASEMENT PARKING FOR FACULTY RESIDENCES

CIVIL WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012 items	Non Scheduled Items
I	EARTH WORK	1158420.36	
II	CONCRETE WORK	1125510.34	
III	REINFORCED CEMENT CONCRETE	16786006.73	
IV	BRICK WORK	232062.68	
V	STEEL WORK	13395.11	
VI	FLOORING	339619.17	
VII	FINISHING	1013385.41	
VIII	WATER PROOFING	255677.50	
IX	HORTICULTURE & LANDSCAPING	31581.35	
X	NON SCHEDULE ITEMS	-	7279907.99
	TOTAL	20955658.64	7279907.99
		A-1	A-2

BASEMENT PARKING FOR FACULTY RESIDENCES

BILL OF QUANTITIES

CIVIL WORKS

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
I EARTH WORK 2.0						
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as per as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cu.M	4974.00	129.35	643386.90
2	2.7	Earth work n excavation over areas (exceeding 30cm in depth, 1.5 m in width as well as 10 Sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed:				
	2.7.1	Ordinary rock	Cu.M	497.40	197.75	98360.85
3	2.25	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 up to 1.5 m.				
			Cu.M	4222.50	83.80	353845.50
4	2.26	Extra for every additional lift of 1.5 m or part thereof in:				
	2.26.1	All kinds of soil	Cu.M	1630.94	34.60	56430.52
5	2.32	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	100 Sq.M	27.18	247.00	6713.46
6	2.36	Deduct for disposed soil not levelled and neatly dressed.	Cum	12.50	25.35	-316.88
				TOTAL		1158420.36

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
				TOTAL [I]		1158420.36
II CONCRETE WORK 4.0						
7	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level.				
	4.1.8	1:4:8 (1 cement :4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cu.M	299.95	3593.30	1077810.34
8	4.18	Extra for addition of synthetic polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete/RCC /Flooring / Water retaining structures by using 125gms of synthetic polyester triangular fiber for 50 kg cement used as per directions of Engineer-in-charge.	Per Bag of 50 kg of Cement	900.00	53.00	47700.00
				TOTAL		1125510.34
					TOTAL [II]	1125510.34
III REINFORCED CEMENT CONCRETE 5.0						
9	5.9	Centring and shuttering including strutting, propping etc. and removal of form for:				
ii	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sq.M	502.64	285.15	143327.80
iii	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sq.M	2158.30	311.20	671662.96
iv	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sq.M	1335.18	262.25	350150.96
v	5.9.6	Columns, pillars, piers, abutments, posts and struts	Sq.M	411.60	365.60	150480.96
vi	5.9.7	Stairs, (excluding landings) except spiral staircases	Sq.M	12.50	326.30	4078.75
ix	5.9.15	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings,	Sq.M	0.49	166.90	81.78
x	5.9.16	Edges of slabs and breaks in floors and walls,				
10	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	5.22.6	Thermo Mechanically Treated bars	Kg	79769.04	62.25	4965622.74

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
11	5.22A	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Above Plinth Level.				
	5.22A.6	Thermo Mechanically Treated bars.	Kg	67346.01	62.25	4192289.12
12	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, 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.				
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works uptp plinth level.	Cu.M	51.05	5242.15	267611.76
	5.33.2	All works above plinth level upto floor V level.	Cu.M	57.96	5781.50	335095.74
13	5.34	Extra for providing richer mixes at all floor levels.Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.				
	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg / Cum	CUM	22.50	63.20	1422.00
14	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of 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 the Engineer - in - charge				
	5.37.1	All works uptp plinth level.	CUM	51.05	5590.60	285400.13

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	5.37.2	All works above plinth level upto floor V level.	CUM	57.96	6130.00	355294.80
14	5.40	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost if admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per directions of the Engineer-in-charge.				
	5.40.1	All works upto Plinth level.	Cu.M	408.37	5519.40	2253957.38
	5.40.2	All works above plinth & upto Floor V Level.	Cu.M	463.68	6059.20	2809529.86
				TOTAL		16786006.73
				TOTAL [III]		16786006.73
IV 6.0 BRICK WORK						
15	6.1	Brick work with F.P.S. brick of class designation 75 in				
	6.1.2	Cement Mortar 1:6 (1 cement : 6 coarse sand)	cum	7.50	3316.55	24874.13
16	6.4	Brick work with modular fly ash lime brick (Flag Bricks) conforming to IS:12894-2002, class designation 100 average compressive strength in super structure above plinth level up to floor V level in:				
	6.4.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	cum	51.28	3876.15	198768.97
17	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	14.89	476.05	7088.38
18	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	Sqm	21.03	63.30	1331.20

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
				TOTAL		232062.68
				TOTAL [IV]		232062.68
V STEEL WORK 10.0						
21	10.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junction and corners, all necessary fittings				
	10.5.1	Using M.S angels 40x40x6 mmfor diagonal braces	Sq.M	5.25	2551.45	13395.11
				TOTAL [V]		13395.11
VI FLOORING						
22	11.3	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 thte cost of nosing of steps etc. complete.				
	11.3.1	40mm thick with 20mm nominal size stone aggregate.	Sq.M	129.79	280.05	36347.69
23	11.2	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 m thick bed of cement mortar 1:4 (1 cement: 4 coarse sand)				
	11.20.2	Medium shade with 50% white cement and 50% ordinary cement.	Sq.M	245.30	789.55	193676.62
24	11.23.5	Udaipur green marble	Sq.M	25.07	1418.95	35573.08
25	11.24	Extra if pre finished nosing to treads of steps of marble stone.	Sq.M	65.76	197.75	13004.04
26	11.26	Kota stone slab flooring over 20mm (average) thick based laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with based of cement mortar 1:4 (1 cement :4 coarde sand)				
	11.26.1	25mm thick	Sq.M	29.88	945.90	28263.49

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
27	11.27	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing	Sq.M	34.33	954.10	32754.25
					TOTAL	339619.17
				TOTAL [VI]		339619.17
VII FINISHING 13.0						
28	13.4	12 mm cement plaster of mix:				
	13.4.1	1:4 (1 cement: 4 coarse sand)	Sq.M	327.24	132.10	43228.40
29	13.5	12 mm cement plaster of mix:				
	13.5.1	1:4 (1 cement: 4 coarse sand)	Sq.M	572.51	153.60	87937.54
30	13.16	6 mm cement plaster of mix:				
	13.16.1	1:3 (1 cement: 3 fine sand)	Sq.M	2718.23	101.00	274541.23
31	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	3290.74	83.80	275764.01
32	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	Sq.M	2718.23	11.75	31939.20
33	13.42	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1	Two or more coats on new work	Sq.M	572.51	37.35	21383.25
34	13.46	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				
	13.46.1	New work (Two or more coats applied @ 1.67 Litres/10 Sq.M over and including base coat of water proofing cement paint applied @ 2.20 Kg/10 Sq.M.	Sq.M	327.24	67.50	22088.70
35	13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :				

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	13.69.1	New work	Sq.M	3.74	60.50	226.27
36	13.79	Extra for addition of synthetic polyester triangular fibre of length 6mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125gms of synthetic polyester triangular fibre for 50kgs. Cement used in cement mortar as per directions of Engineer-in-Charge.	Per Bag 50 Kg of Cement	113.51	53.00	6016.03
37	13.8	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sq.M	3290.74	76.05	250260.78
					TOTAL	1013385.41
				TOTAL [VII]		1013385.41

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
VIII WATER PROOFING 22.0						
38	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/sq. 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 115 mm 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 approve 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 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 to 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.	Sq.M	325.00	786.70	255677.50
				TOTAL [VIII]		255677.50
IX CH-23.0 HORTICULTURE & LANDSCAPING						

[illegible]

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
2	N.S-2	Providing and Fixing ISI marked 35mm thick flush Prelaminated door shutter, (with 1mm thick lamination on both sides) core of block board construction with frame of 1st class hardwood and well matched Commercial 3 ply veneering and as approved by Engineer.	Sq.M	1.87	2816.00	5265.92
3	N.S-3	Brick work flyash cement brick class designation 75 above plinth level cement mortar				
		Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	21.98	3589.32	78893.25
4	N.S-4	Half brick work flash cement brick of class designation 75 cement mortar 1:4 (1 cement : coarse sand) including scaffolding and curing etc, complete as per specification superstructure above plinth level upto floor level cement mortar 1:4 (1 cement : 4 coarse sand)				
		Cement mortar 1:4 (1 cement : 4 coarse sand)	Sq.M	4.42	378.41	1672.57
5	N.S.-5	Supply and fixing of non OZONE make stainless steel railing with specifications SS-304 grade railing made of 38mm baluster and 38mm top rail of 1.6mm thickness with 3 mid rails of 12 OD tube connected with CNC machine made. Modular connectors fixed with dash fasteners. Centre distance between each baluster shall be 1000mm. (Market Rate Item).	Rm	48.20	4820.00	232324.00
6	N.S-6	WATER PROOFING TREATMENT WITH KRYSTOL T1+T2 SYSTEM Providing and applying of cementitious crystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc. with Krystol T1/T2 system. The application to be done from -ve (negative) side on a wet open pore concrete surface with brush @ 0.8kg of Krystol T1 & 0.8kg of Krystol T2 as per manufacturer specification. including making grooves of 10x15mm size on the construction joints and treating with Krystol T1 mixed with water in ratio 5:1 (5 parts of krystol T1: 1 part of clean water) as per manufacturers specification etc. and as per direction of Engineer-in-Charges. The rate also includes the cleaning of surface to be treated with air compressor wherever required.	Sq.M	1200.08	737.00	884458.96

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
7	N.S-7	Providing applying cementations Krystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc with krystol T1 system/ . The application to be done from +ve(postive) side on wet open pore concrete surface with brush @ 1Kg/Sq.M as per manufacturer specification.	Sq.M	3507.07	441.00	1546617.87
8	N.S.-8	Providing and Fixing Antiskid Vitrified pavement tiles 300x200x10mm thick make 'PAVIT' [DECOR Series or equivalent make and design laid on 20mm thick cement mortar 1:4 1 cement: 4 coarse sand] with Fairfix TA[STD]or other equivalent [Tile Adhesive 3-4mm thickness] and jointing with FAirFix TG[STD] or other equivalent Tile Grout as per approved colour complete .	Sq.M	2221.00	1604.00	3562484.00
9	NS-9	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	407.72	300.00	122316.00
10	N.S-10	STAINLESS STEEL FITTINGS				
	a	Providing and fixing S.S.Sliding door bolt size 16mmx300mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebco/Ozone/Dorma)	Nos	1.00	538.00	538.00
	b	Providing and fixing S.S.Sliding door bolt size 16mmx250mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebco/Ozone/Dorma)	Nos	1.00	457.00	457.00
	c	Providing & fixing S.S. tower bolt Size 250x12mm finish SS matt with necessary screws etc., complete (Makes : Ebco/Ozone/Dorma)	Nos	1.00	269.00	269.00
	d	Providing & fixing S.S. handle size 25x150mm with necessary screws etc., complete.(Makes : Ebco/Ozone/Dorma)	Nos	1.00	900.00	900.00
				TOTAL [XVI]		7279907.99

BILL OF QUANTITIES						
VENTILATION WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		ELECTRICAL				
1.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc, with coke and salt as required.	Set	1.00	3,996.00	3,996.00
2.0	5.11	Providing and Fixing 25 mm x 5 mm. G.I. strip in 40 mm dia. G.I. Pipe from earth electrode including connections with GI nut, bolt, spring, washer excavation and refilling etc. as required.	RM	5.00	364.00	1,820.00
3.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	100.00	120.00	12,000.00
4.0	4.1	Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5%, in convient sections, joined with connectors, suspended from the ceiling with MS suspenders including bolts & nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	150.00	405.00	60,750.00
5.0	7.8	Laying and fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 kV grade of following size on cable tray as required.				
	7.8.1	Upto 35 sqmm (Clamped with 1 mm thick saddle)	RM	150.00	16.50	2,475.00
	7.8.2	Above 95 sqmm and upto 185 sqmm (Clamped with 25/40 x 3 mm MS flat clamp)	RM	150.00	47.50	7,125.00
6.0	9.1	Supplying and making indoor end termination with brass compression gland and aluminium lugs for the following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
i	9.1.25	3.5 Core 120 sq. mm. Armoured Aluminium cable.	Nos.	1.00	383.00	383.00
ii	9.1.32	4 Core 10 sq. mm. Armoured Aluminium cable.	Nos.	4.00	146.00	584.00

7.0	7.5	Laying of One number PVC Insulated and PVC Sheathed/XLPE aluminium conductor cable of 1.1 kV grade of following size in the existing RCC/HUME/STONEWARE/METAL pipe as required.				
	7.5.3	Above 95 sqmm and upto 185 sqmm	RM	150.00	25.00	3,750.00
8.0		Point wiring in PVC conduit , with modular type switch :-				
		Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.				
i	1.10.3	Group C	Point	845.00	664.00	561,080.00
9.0		Sub main wiring in PVC conduit :-				
		Wiring for Submain/ Circuit wiring alongwith earth wire with the following sizes of PVC insulated, copper conductor single core cable in surface/ recessed PVC conduit as required.				
i	1.14.2	2 x 2.5 sq.mm. +1 x 2.5 sq.mm. Earth wire	RM	250.00	131.00	32,750.00
ii	1.14.11	4 x 10 sq.mm. + 2 x 10 sq.mm. Earth wire	RM	100.00	562.00	56,200.00
10.0		Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
i	1.21.2	25 mm.	RM	250.00	64.50	16,125.00
ii	1.21.4	40 mm	RM	50.00	106.00	5,300.00
11.0		Supplying and fixing 5 amps. to 32 amps. rating, 240 volts 'C' series, miniature circuit breaker (MCB) suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.10.1	Single pole	Each	12.00	141.00	1,692.00

12.0		Supplying and fixing following way, prewired TP & N MCB distribution board of sheet steel for 415 volts, on surface /recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.8.7	8 way (4 + 24), Double door, horizontal type	Each	1.00	8,984.00	8,984.00
13.0	1.41	Installation, testing and commissioning of prewired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tubes etc. directly on ceiling / wall, including connection with 1.5 sq. mm. PVC insulated, copper conductor, single core cable etc. as required.	Each	79.00	69.50	5,490.50
		Total C/f to DSR Summary				780,504.50
		Non DSR				
1.0		Supplying and making indoor end termination with brass compression gland and aluminium lugs for the following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
i		4 Core 6 sq. mm. Armoured Aluminium cable.	Nos.	8.00	130.00	1,040.00
2.0		Supply, testing and commissioning of 1100 Volt grade XLPE insulated and sheathed aluminium conductor armoured cables including the cost of providing required gap between adjacent cables (minimum one cable dia.) and including the cost of providing identification tags etc. complete as per specification, as required.				
i		3.5 Core 120 sq. mm. Armoured Aluminium cable.	M	150.00	1,315.00	197,250.00
ii		4 Core 10sq. mm. Armoured Aluminium cable.	M	50.00	857.00	42,850.00
iii		4 Core 6sq. mm. Armoured Aluminium cable.	M	100.00	462.00	46,200.00

3.0		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Following Panels, fabricated out of 14/16 Gauge CRCA sheet steel in cubicle compartmentised modular construction complete with supporting rigid structure, interconnections, aluminium bus bar strip with heat shrinkable colour coded current density of bus bar 0.8 A per sqmm Identification on all breakers & MCCB to indicate the area they serve. Degree of protection IP 42, earthing hinged doors with 2.5 sqmm tinned braded copper wire, free standing floor mounted with removable Gland Plates on top & bottom of the panel, all mounting plates shall be GI sheets. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. Galvanised hardwares with zinc passivation shall be used in fabrication of panels 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system.				
		All MCCB's shall be with microprocessor based O/L, S/C and E/F releases and ON/OFF indication lamps.				
i		Basement Ventilation Panel				
		Incoming:				
		One (1) Nos.200A, TPN MCCB with microprocessor based O/L, S/C and E/F releases.				
		Metering, Indication & Protection:				
		1 Sets of (0-500 Volt) 96 x 96mm Voltmeter with control fuses and 3 way selector switch.				
		1 Sets of (0-200 Amps) 96 x 96mm CT operated Ammeter with 3 way selector switch and 200/5A, CL-1, 10VA CT.				
		1 Sets of phase indicating lamps with MCB.				
		Bus Bar:				
		250A, TPN Al. Bus Bar of suitable length (Neutral shall be half rated).				
		Outgoings:				
		Five (5) Nos. 63 A, TPN MCCB	Set	1.00	50,000.00	50,000.00

ii		Four (4) No. Auto Star/ Delta starter of 10 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	2.00	20,000.00	40,000.00
ii		Four (4) No. Auto DOL starter of 2 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	2.00	10,000.00	20,000.00
4.0		Supply of wall / ceiling surface mounted T5 fluorescent tube light luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required each fluorescent tube etc complete as required as per the standard catalogue item as approved by engineer-in-charge . power factor shall not be less than 0.95 and THD shall be less than 10%				
i		1 x 28 W T5 (CRCA Body)(TMS122 M 1xTL5-28W EBT)	Each	79.00	1,170.00	92,430.00
II		DUCTING:				
1.0		Sheet Metal Duct:				
		Supplying, fabricating, installing and testing of factory fabricated sheet metal ducting complete as per SMACNA with splitter damper, duct damper, vanes etc. as per specifications and approved shop drawing complete as required.				
		Air-conditioning Ducting :				
		Galvanized sheet steel				
i		26 SWG	SQMT	25.00	550.00	13,750.00
ii		24 SWG	SQMT	35.00	650.00	22,750.00
iii		22 SWG	SQMT	70.00	750.00	52,500.00
iv		20 SWG	SQMT	115.00	850.00	97,750.00
v		18 SWG	SQMT	5.00	1,000.00	5,000.00
2.0		Supplying, installing, and testing of GI volume control damper within ducts to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per approved shop drawings.	SQMT	4.00	5,500.00	22,000.00
3.0		Return Air Grills:				

		Supplying, installing, testing and balancing of return air grilles (Linear/single louvred) with volume control dampers of various sizes. Each grill shall have be with fixed horizontal front bar at 15 deg. deflection, complete as per specification and drawing.				
i		Powder Coated linear Aluminium grilles with volume control damper (for exhaust of toilets).	SQMT	7.50	15,000.00	112,500.00
4.0		Exhaust Air Louvers:				
		Supplying, installing and balancing of exhaust air anodized aluminum intake louvers with bird screen & aluminum volume control damper, complete as per specification & drawings				
i		Exhaust Air Louvers (with birdscreen but Without VCD)	SQMT	7.50	6,500.00	48,750.00
III		VENTILATION SYSTEM:				
1.0		Supply,installation,testing & comissioning of Mixed Flow/ Axial Fans. The fans shall be suitable for installation in any position (Horizontal or Vertical). The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall be AMCA certified for Air performance and shall be UL listed for Power and smoke ventilator strictly adhering to the attached Specifications.				
i		Mixes flow fans for basement exhaust 40,000cfm, 10mm SP, 10hp, 415±10% volts 50Hz power supply	Nos	2.00	1,100,000.00	2,200,000.00
ii		Axial flow fans for basement exhaust 6,000cfm, 30mm SP, 2hp, 415±10% volts 50Hz power supply	Nos	2.00	260,000.00	520,000.00
		Total C/f to NON DSR Summary				3,584,770.00

CONSTRUCTION OF FACULTY RESIDENCES 4 BLOCKS (PHASE-II) AT N.I.T. ROURKELA**ABSTRACT OF COST**

	DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
1	CIVIL WORKS	187615889.91	51738990.62
2	PLUMBING WORKS	12875608.85	13814950.00
3	ELECTRICAL WORKS	11585513.00	15655755.00
4	SOLAR WATER HEATER	-	3000000.00
5	FIRE FIGHTING WORKS	132371.60	3972865.00
6	SOLAR ENERGY		9000000.00
7	FDA		1519250.00
	TOTAL	212209383.36	98701810.62
G.TOTAL		310911193.98	

CONSTRUCTION OF FACULTY RESIDENCES 4 BLOCKS (PHASE-II) AT N.I.T. ROURKELA			
CIVIL WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012 Items	Non Scheduled Items
I	EARTH WORK	1397736.28	
II	CONCRETE WORK	4990862.00	
III	REINFORCED CEMENT CONCRETE	105907143.07	
IV	BRICK WORK	10270675.00	
V	MARBLE WORK	4527256.90	
VI	WOOD WORK	4036986.25	
VII	STEEL WORK	4971862.24	
VIII	FLOORING	16392607.91	
IX	ROOFING	3976808.05	
X	FINISHING	25781708.12	
XI	ROAD WORK	44569.54	
X	ALUMINIUM WORKS	2264869.47	
XI	WATER PROOFING	3052805.08	
XII	NON SCHEDULE ITEMS	-	51738990.62
	TOTAL	187615889.91	
	TOTAL	187615889.91	51738990.62
		A-1	A-2

BILL OF QUANTITIES						
CIVIL WORKS						
S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
I EARTH WORK 2.0						
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cu.M	2940.00	129.35	380289.00
2	2.7	Earth work n excavation over areas (exceeding 30cm in depth, 1.5 m in width as well as 10 Sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed:				
	2.7.1	Ordinary rock	Cu.M	300.00	197.75	59325.00
3	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 Sq.M on plan) including dressing of sides and ramming ob bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 m.				
	2.8.1	All kinds of soil	Cu.M	1548.00	130.80	202478.40
4	2.9	Excavation work by mechanical means (Hydraulic excavatory)/manual means in foundation trenches or drains not exceeding 1.5m in width or 10 Sq.M on plan including dressing of sides and ramming or bottoms lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.				
	2.9.1	Ordinary rock	Cu.M	156.00	212.00	33072.00
5	2.24	Extra rates for quantities of works, executed :				
	2.24.2	In or under foul position, including pumping out water as required	meter depth	2400.00	32.34	77616.00
6	2.25	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 up to 1.5 m.				
	2.26	Extra for every additional lift of 1.5 m or part thereof in:				
i)	2.26.1	All kinds of soil	Cu.M	4560.00	34.60	157776.00
ii)	2.26.2	Ordinary or hard rock	Cu.M	450.24	62.00	27914.88
7	2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	cum	300.00	110.75	33225.00
8	2.28	Surface dressing of the ground including removing vegetation and in equalities not exceeding 15cm dep and disposal of rubbish, lead upto 50m and lift upto 1.5m.				
	2.28.1	All kinds of soil.	100sqm	70.00	935.25	65467.50
9	2.32	Clearing grass and removal of the rubbish upto a distance of 50 outside the periphery of the area cleared.	100sqm	40.00	247.00	9880.00
10	2.36	Deduct for disposed soil levelled and neatly dressed.	Cu.M	50.00	-25.35	-1267.50
				TOTAL [I]		1397736.28
II CONCRETE WORK 4.0						
11	4.1	Providing and laying in position cement cncrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level.				
	4.1.8	1:4:8 (1 cement :4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cu.M	650.00	3593.30	2335645.00
12	4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapetx,coping, bed blocks, anchor blocks.				
(i)	4.2.3	1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cu.M	15.00	5272.40	79086.00
(ii)	4.2.5	1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Cu.M	40.00	4782.35	191294.00
13	4.10	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)	Sq.M	250.00	207.55	51887.50
14	4.12	Extra for providing and mixing proofing material in cement concrete work @ 1 Kg per 50kg of cement	per 50 kg cement	70.00	35.35	2474.50

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
15	4.13	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	Sq.M	250.00	96.65	24162.50
16	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate 20mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including fini	Sq.M	550.00	338.75	186312.50
17	4.18	Extra for addition of synthetic polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete/RCC /Flooring / Water retaining structures by using 125gms of synthetic polyester triancula	Per Bag of 50 kg of Cement	40000.00	53.00	2120000.00
					TOTAL [II]	4990862.00
III REINFORCED CEMENT CONCRETE 5.0						
18	5.2	Reinforced cement concrete work in wall (any thickness) including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutment, posts and struts etc, up to floor five level excluding cost of centering, shuttering, finishing and reinforcement.				
	5.2.2	1:1.5:3 (1 cement :1.5 coarse sand :3 graded stone aggregate 20 mm nominal size)	Cum	350.00	5735.75	2007512.50
19	5.9	Centring and shuttering including strutting, propping etc. and removal of form for:				
i	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sq.M	780.00	166.90	130182.00
ii	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sq.M	150.00	180.40	27060.00
iii	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sq.M	20000.00	311.20	6224000.00
iv	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sq.M	15000.00	265.25	3978750.00
v	5.9.6	Columns, pillars, piers, abutments, posts and struts	Sq.M	7000.00	365.60	2559200.00
vi	5.9.7	Stairs, (excluding landings) except spiral staircases	Sq.M	350.00	326.30	114205.00
vii	5.9.9	Arches, domes, vaults exceeding 6m span	Sq.M	250.00	866.70	216675.00
vix	5.9.14	Extra for shuttering in circular work (20% of respective centring and shuttering items)				
	(a)	For Circular Slabs [Rate 20% of 187.35=37.47]	Sq.M	180.00	33.38	6008.40
ix	5.9.15	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	Sq.M	600.00	166.90	100140.00
x	5.9.16	Edges of slabs and breaks in floors and walls,				
	5.9.16.1	Under 20 cm wide	R.M.	7500.00	99.45	745875.00
xi	5.9.17	Cornices and mouldings	Sq.M	78.80	495.50	39045.40
xii	5.9.19	Weather shade, Chajias, corbels etc. including edges	Sq.M	165.88	411.10	68193.27
xiii	5.9.20	Suspended floors, roofs, landings, balconies and access platform. With water proof ply 12mm thick.	Sq.M	250.00	488.05	122012.50
Xiii	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.	sqm	100.00	470.10	47010.00
20	5.11	Extra for additional height in centring, shuttering where ever required with adequate bracing, propping etc. including cost of de shuttering and decentering at all levels, over a height of 3.5 m for every additional height of 1 metre or part thereof (Plan area to be measured).				
21	5.11.1	Suspended floors, roofs, landing, beams and balconies (plan area to be measured).	Sq.M	1000.00	121.65	121650.00
22	5.13	Providing, hoisting and fixing upto floor five level precast reinforced cement concrete in small lintels not exceeding 1.5 m clear span upto floor five level including the cost of required centering, shuttering but excluding the cost of reinforcement, with 1:2:4 (1 cement:2coarse sand :4 graded stone aggregate 20 mm nominal size)	Cu.M	50.00	8720.30	436015.00
23	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	5.22.6	Thermo Mechanically Treated bars	Kg	240000.00	62.25	14940000.00
21	5.22A	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Above Plinth Level				
	5.22A.6	Thermo Mechanically Treated bars.	Kg	585000.00	62.25	36416250
25	5.30	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	R.M.	60.00	22.25	1335
26	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, 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.				
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works upto plinth level.	Cu.M	180.00	5242.15	943587

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	5.33.2	All works above plinth level upto floor V level.	Cu.M	420.00	5781.50	2428230
27	5.34	Extra for providing richer mixes at all floor levels.				
		Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.				
	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg / Cum)	Cu.M	700.00	63.20	44240
28	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Qtl	340.00	589.80	200532.00
29	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of 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 the Engineer - in - charge				
	5.37.1	All works upto plinth level.	Cu.M	250.00	5590.60	1397650.00
	5.37.2	All works above plinth level upto floor V level.	Cu.M	500.00	6130.00	3065000.00
30	5.40	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost if admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per directions of the Engineer-in-charge.				
	5.40.1	All works upto Plinth level	Cu.M	1425.00	5519.40	7865145.00
	5.40.2	All works above plinth & upto Floor V Level	Cu.M	3575.00	6059.20	21661640.00
					TOTAL [III]	105907143.07
IV 6.0 BRICK WORK						
31	6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:				
	6.1.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	500.00	3316.55	1658275.00
32	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	1500.00	3316.55	4974825.00
33	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	6500.00	476.85	3099525.00
34	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	Sqm	8500.00	63.30	538050.00
					TOTAL [IV]	10270675
V 8.0 MARBLE WORK						
35	8.2	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, vanity counters, windows sills, facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high class finish etc. complete at all levels				
	8.2.2	Granite of any colour and shade				
	8.2.2.2	Area of slab over 0.50 sqm	Sq.M	1418.60	3083.40	4374111.24
36	8.4	Extra for fixing marble / granite stone over and above corresponding basic item, in facia and drops of width up 150 mm with epoxy resin based adhesive including cleaning etc. complete	R.M.	570.08	185.80	105920.86
37	8.5	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / Granite / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	Nos	168.00	281.10	47224.80
					TOTAL [V]	4527256.90

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
VI WOOD WORK 9.0						
38	9.15	Deduct if fixed shutters (without hinges) are provided instead of openable shutters for doors, windows or clerestory windows with:				
	9.15.1	Stainless steel butt hinges with stainless steel screws:				
	9.15.1.1	For 2nd class teak wood and other inferior class of wood shutters.	Sq.M	418.08	142.05	59388.26
39	9.31	Providing and fixing wire gauge laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 :2001 (Part B) using galvanised wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm as per IS :1568, for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, as per directions of Engineer-in-charge:				
	9.31.1	35 mm thick shutters	Sq.M	418.08	2126.55	889068.02
40	9.40	Providing and fixing wooden moulded beading to door and windows frames with iron screws, plugs and priming coat on unexposed surface etc. complete				
	9.40.1	Second class teak wood				
	9.40.1.2	50x12 mm	R.M.	6828.08	135.70	926570.46
41	9.47	Providing and fixing nickel plated M.S. pipel curtain rods with nickel plated brackets:				
	9.47.1	20 mm dia (heavy type)	R.M.	444.08	107.10	47560.97
42	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.				
	9.48.1	Fixed to steel windows by welding.	Kg	8066.24	90.75	732043.54
43	9.51	Providing and fixing fly proof galvanised M.S. wire gauze to windows and clerestory windows using galvanised M.S. wire gage with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.				
	9.51.2	With 12mm mild steel U beading.	Sq.M	578.52	484.75	280437.57
44	9.90	Providing and fixing special quality chromium plated brass cupboard locks with six levers including necessary screws etc. complete (Best make of approved quality) of:				
	9.90.2	Size 50 mm	Each	504.00	147.05	74113.20
45	9.119	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door	R.M.	845.04	404.60	341903.18
	9.120	Providing and fixing to existing door frames.				
46	9.120	Providing and fixing factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19 mm x 19 mm for styles and 15x15 mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture .M.S. frame covered with 5 mm thick heat moulded PVC 'C' channel of size 30 mm thickness, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on both side forming styles and 5 mm thick, 95 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided both side of the panel. 10 mm (5 mm x 2) thick, 20 mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail, paneling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7 mm (5 mm+2 mm) thick x 15 mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5 mm thick PVC strip of 20 mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge, manufacturer's specification & drawing.				
	9.120.2	30 mm thick pre laminated PVC door shutters	Sq.M	231.88	2958.00	685901.04
				TOTAL [VI]		4036986.25
VII STEEL WORK 10.0						
48	10.14	Providing and fixing pressed steel door frames confirming to IS:4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5 mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre treatment of the surface as directed by Engineer-in-charges:				
i	10.14.1	Profile B	R.M.	1746.08	346.75	605453.24
i	10.14.2	Profile C	R.M.	3778.20	370.00	1397934.00

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
49	10.16	Steel work in built up tubular trusses including cutting , hoisting ,fixing in position and applying a priming coat of approved stel primer, welded and bolted including special shaped washers etc. complete.				
	10.16.3	Electric Resistance or induction butt welded tubes.	Kg	16000.00	105.85	1693600.00
50	10.25	Steel work welded in built up sections/ framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.25.2	In gratings, frames, guard bard ladder, railings, brackets, gates and similar works	Kg	5500.00	77.90	428450.00
51	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.				
	10.26.1	M.S. tube.	Kg	8500.00	86.45	734825.00
51(a)	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	kg	200.00	558.00	111600.00
				TOTAL [VII]		4971862.24
VIII FLOORING						
52	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1cement : 3 coarse sand), finished with a floating coat of neat cement.				
	11.6.1	18 mm thick	Sq.M	485.44	258.20	125340.61
53	11.23	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement:4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with:				
(i)	11.23.2	Raj nagar plain.	Sq.M	3509.56	1265.35	4440821.75
(ii)	11.23.5	Udaipur green marble.	Sq.M	3748.36	1418.95	5318735.42
	11.24	Extra if pre finished nosing to treads of steps of marble stone.	R.M.	899.04	197.75	177785.16
54	11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 metre.	Sq.M	364.32	230.55	83993.98
55	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of 1:4 (1 cement :4 coarse sand):				
	11.26.1	25 mm thick	Sq.M	2500.00	945.70	2364250.00
56	11.27	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	Sq.M	65.00	954.10	62016.50
57	11.31	Extra for pre finished nosing in treads of steps of kota stone / sand stone slab	R.M.	90.00	52.45	4720.50
58	11.32	Extra for kota / stone sand stone in treads of steps and risers using single length up to 1.05 metre.	Sq.M	40.00	12.10	484.00
59	11.36	Providing and fixing quality ceramic glazed wall tiles conforming to IS:15622(thickness to specified by the manufacture)of approved make in all colours , shades excepted burgundy, bottle green,black of any size as approved by Engineer -in-charge in skirting ,risers of steps and dado over 12 mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) and jointing with gry cement slurry @ 3.3.kg per sqm including pointing in white cement mixed with pigment of matching shade complete	Sq.M	4000.00	724.25	2897000.00
60	11.37	Providing and laying ceramic glazed floor tiles 300x300mm (thickness to be specified by the manufacture) of Ist quality conforming to IS:15622 of approved make in colour such as white ,Ivory ,Grey,Fume Red Brown,laind on 20mm thick cement Mortar 1:4 (1cement:4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete	Sq.M	1200.00	764.55	917460.00
				TOTAL [VIII]		16392607.91
IX ROOFING 12.0						
61	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design:				
	12.21.1	In 75x75mm deep chase	R.M.	885.00	109.05	96509.25

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
62	12.22	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.	Each	96.00	148.55	14260.80
63	12.55	Providing and fixing Heat Resistant Terrace Tiles (300mm x 300mm x 20mm) with SRI (Solar refractive index) > 78, solar reflection >0.70 and initial emittance >0.75 on waterproof and sloped surface of terrace, laid on 20mm thick cement sand mortar in the ratio of 1:4 (1 cement :4 coarse sand) and grouting the joints with mix of White cement & marble powder in ration of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150mm height along the parapet walls in the same manner.	Sq.M	3740.00	1033.70	3866038.00
				TOTAL [IX]		3976808.05
X FINISHING 13.0						
64	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix:				
i	13.2.1	1:4 (1 cement: 4 fine sand)	Sq.M	1000.00	143.55	143550.00
ii	13.2.2	1:6 (1 cement: 6 fine sand)	Sq.M	40000.00	130.20	5208000.00
65	13.4	12 mm cement plaster of mix:				
	13.4.1	1:4 (1 cement: 4 coarse sand)	Sq.M	11698.64	132.10	1545390.34
66	13.9	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.				
67	13.9.1	12mm cement plaster	Sq.M	119.04	173.10	20605.82
	13.16	6 mm cement plaster of mix:				
	13.16.1	1:3 (1 cement: 3 fine sand)	Sq.M	11950.72	101.00	1207022.72
68	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	43232.68	83.80	3622898.58
69	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.				
	[a]	Height exceeding 10m but not exceeding 13m	Sq.M	2489.08	28.85	71809.96
	[b]	Height exceeding 13m but not exceeding 16m	Sq.M	912.64	57.70	52659.33
70	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	45000.00	83.80	3771000.00
71	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	Sq.M	6000.00	11.75	70500.00
72	13.42	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1	Two or more coats on new work	Sq.M	15000.00	37.35	560250.00
73	13.46	Finishing walls with Acrylic Smooth exterior paint of required shade :				
	13.46.1	New work (Two or more coats applied @ 1.67Litres/10 Sq.M over and including base coat of water proofing cement paint applied @ 2.20 Kg/10 Sq.M.	Sq.M	8047.04	67.50	543175.20
74	13.50	Applying priming coat :				
	13.50.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood.	Sq.M	2000.00	24.70	49400.00
	13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	Sq.M	8854.56	20.70	183289.39
75	13.68	French sprit polishing:				
	13.68.1	Two or more coats on new works including a coat of wood filler	Sq.M	423.36	137.45	58190.83
76	13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :				
	13.69.1	New work	Sq.M	1890.28	60.50	114361.94
77	13.79	Extra for addition of synthetic polyester triangular fibre of length 6mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125gms of synthetic polyester triangular fibre for 50kgs. Cement used in cement mortar as per directions of Engineer-in-Charge.	Per Bag of 50 Kg Cement	3868.00	53.00	205004.00
78	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sq.M	50000.00	76.05	3802500.00
79	13.82	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.	Sq.M	15000.00	56.60	849000.00
80	13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.	Sq.M	20000.00	61.45	1229000.00
81	13.84	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	13.84.2	Two Coats	Sq.M	18000.00	137.45	2474100.00
				TOTAL [X]		25781708.12
XI ROAD WORK 16.0						
82	16.48	Painting road surface markeing with adequate No. of coats 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)	Sq.M	37.00	95.75	3542.75
83	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 with lead upto 50 metres	Sq.M	113.16	61.25	6931.05
84	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.	Sq.M	11.32	536.65	6074.88
85	11.45	Providing and laying 500 x500 x40mm thick Turf paver (Turfpave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and based courde and filling with 150mm thick jamuna sand, including spreading ,well ramming ,consolidating and finishing smooth etc. all complete as per direction of Engineer-in-Charge.	Sq.M	16.97	1651.20	28020.86
				TOTAL [XI]		44569.54
X ALUMINIUM WORK 21.0						
86	21.3	Providing anf 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 saap beading shall be paid in basic item):	Sq.M	716.28	1227.80	879448.58
	21.3.3	With float glass panes of 8 mm thicknes.				
87	21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing 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.				
	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	Nos	128.0	1953.10	249996.80
88	21.10	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6mm thick clear float glass both side, having 12mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	Sq.M	298.88	3328.40	994792.19
89	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	Sq.M	31.64	4444.75	140631.89
				TOTALX		2264869.47
XI WATER PROOFING 22.0						
90	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) Applyaing a slurry coat of neat cement using 2.75 kg/sq. of cement admixed with water prooving compound conforming to IS. 2645 and aproved 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 115 mm 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				

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
		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 approve 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 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 to two weeks for curing and for final test. All above operations to be done in order and as directed and approved by the Engineer-in-Charge.				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sq.M	3880.52	786.70	3052805.08
				TOTAL [XI]		3052805.08
XII NON SCHEDULE ITEMS						
1	NS-1	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	500.00	300.00	150000.00
1(a)	N.S-1 (a)	Diluting and injecting chemical emulsion for PRE-CONSTRUCTIONAL Anti-termite treatment and creating continuous chemical barrier, wall trenches, top surface of plinth filling, along the external perimeter of building, over the top surface of consolidated earth of which apron is to be laid, surroundings of pipes and conduits etc. complete as per specification. (Plinth area of the building at ground floor only shall be measured for payment). Chlorpyrifos Emulsifiable concentrate of 20% with 1% Concentration.	Sq.M	4000.00	310.39	1241560.00
2	9a	Providing and Fixing ISI marked 35mm thick flush Prelaminated door shutter, (with 1mm thick lamination on both sides) core of block board construction with frame of 1st class hardwood and well matched Commercial 3 ply veneering and as approved by Engineer	Sq.M	945.12	2816.00	2661457.92
3	N.S-3	Brick work flyash cement brick class designation 75 above plinth level cement mortar				
		Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	650.00	3589.32	2333058.00
4	N.S-4	Half brick work flyash cement brick of class designation 75 cement mortar 1:4 (1 cement : coarse sand) including scaffolding and curing etc, complete as per specification superstructure above plinth level upto floor level cement mortar 1:4 (1 cement : 4 coarse sand)				
		Cement mortar 1:4 (1 cement : 4 coarse sand)	Sq.M	1800.00	378.41	681138.00
5	N.S-5	Supplying and Fixing Drapery rods 30mm dia of M.S Pipe of thickness 1.6mm with powder coating (wooden finish) including metal brackets, rings and ends all as specified. Fixed to brick walls/RCC lintels with dash fasteners.	R.M	1231.00	150.00	184650.00
6	N.S-6	Providing and laying in position cement concrete 1:5:10 (1 cement: 5 coarse sand: 10 Brick aggregate 40mm nominal Size) in foundations/ sunken floors of toilets excluding the cost of centering and shuttering.	Sq.M	348.24	3396.00	1182623.04
7	N.S-7	Providing applying cementations Krystalline based water proofing for concrete raft, walls, water tanks, slabs, concrete floors etc with krystol T1 system/ Dr fixet/hydroccret . The application to be done from +ve(postive) side on wet open pore concrete surface with brush @ 1Kg/Sq.M as per manufacturer specification	Sq.M	5666.04	441.00	2498723.64
8	N.S-8	Supply & fixing of structural glazing at Façade of ground plus three buildings using glazing section on direct stick mullion & transom system of which mullion shall be of 80x50x1.8 mm with notch & transom to be of 50x50x1.8 mm with notch , Aluminum Glazing sections shall be powder coated with heat treatment on three surfaces in Ivory/Black colour using 6mm thick TOUGHENED SGG EVO Star ET 425 AURA GREEN HEAT REFLECTIVE GLASS VLT-24%, Solar Factor- 0.25 and U-value- 3.72 W Sqm K of Saint-Gobain make of approved colour of to be pasted with 12mm x 6 mm both side adhesive Spacer foam tape & structural silicon of Dow Corning 995 grade or it's equivalent. The Weather /water sealing of glass joints shall be done with 10 mm wide Dow Corning make weather sealant of grade 789 or its equivalent. The Mullion of Aluminum structure is to be fastened with R.C.C. Slab/beam with help of Powder coated/ Galvanized MS Brackets of 75 mm length with help of M10 x 100 mm Mechanical tempered Dash Fasteners. The job includes all necessary hardware, cleat, Screws, nut washers etc. Complete job with all material and labour as per direction of Engineer-in-charge	Sq.M	170.40	5662.00	964804.80

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
9	N.S-9 (a)	Providing, supplying & fixing of glazed 2 Track -2 Panel Sliding Windows with mesh and top fixed of 450 mm made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with Galvanized Iron profiles through out the window. The outer frame having a overall size of 60 x 45 mm with reinforcement of 1 mm thickness and sash with overall size of 39 x 58 mm with reinforcement of 1.5 mm thickness. Glazing bead for fixing of glass shall be of size 20 x 18mm and coextruded with gasket. The flymesh adaptor for mesh shall be of overall size 25 x 34mm and screen sash of overall size 18.5 x 42.5 mm.Fiber Glass mesh shall be provided in mesh shutter. The outer frame for the fixed part shall have a overall size of 60 x 55 mm with reinforcement of 1 mm thickness and Glazing bead for fixing of glass shall be of size 34 x 20mm and coextruded with gasket. Windows shall be provided with 5mm thick SOLAR glass and standard hardware.Each sliding shutter shall be provided with 2nos of flat nylon rollers and 1 no powder coated die cast aluminium touch lock. Wall thickness of frame & sash shall be 2 - 2.2 mm. (Approved as per Architects &Client)	Sq.M	957.32	5312.00	5085283.84
9(b)	N.S (9b)	Providing, supplying & fixing of glazed 3Track - 2 Panel Sliding Window With Mesh of height 1500 mm made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with GI throughout the window. The sliding outer frame having a overall size of 108 x 45 mm with reinforcement of 1 mm thickness, sash with overall size of 39 x 58 mm with reinforcement of 1.5 mm thickness, mesh sash of overall size 30 x 48.5 mm reinforced with 1.5 mm of GI. Glazing bead for fixing of glass shall be of size 20 x 18mm and coextruded with gasket. Fiber Glass mesh shall be provided in mesh shutter. Windows shall be provided with 5 mm thick SOLAR glass and standard hardware .Each shutter shall be provided with 2nos of flat nylon rollers and 1 no powder coated die cast aluminium touch lock. Wall thickness of frame & sash shall be 2 - 2.2 mm.(Approved as per Architects &Client)	Sq.M	277.20	5691.00	1577545.20
9(C.)	N.S (9C)	Providing, supplying & fixing of Fixed Louvered Ventilator made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with Galvanized Iron profiles through out the window. The outer frame having a overall size of 60 x 55 mm with reinforcement of 1 mm thickness and Mullion with overall size of 74 x 60 mm with reinforcement of 1 mm thickness. Ventilator shall be provided with 4.5 mm Pin Head glass, standard hardware. Wall thickness of frame & Mullion shall be 2 - 2.2 mm (Approved as per Architects &Client)	Sq.M	113.40	5314.00	602607.60
10	N.S-10	Supply and Fixing of KALZIP 65/400 "Self Supported" Secret Fix Standing Roofing System in 0.9mm Thick AA 3004 Aluminium Alloy. The general roof-construction shall comprise from bottom to top:	Sq.M	301.44	3502.00	1055642.88
11	N.S-11	Providing and Fixing Glass Mosaic Tiles (20x20)x4mm thick Repeated Pattern on walls with glass Mosaic Adhesive over 12mm thick screed in cement mortar 1:4 (1Cement 4 coarse sand) tile joints pointed in neat white cement slurry mixed with pigment to match	Sq.M	2590.44	1396.00	3616254.24
12	N.S-12	VETRIFIED DOUBLE CHARGED Providing & fixing Vitrified Tiles 605x605mm (R Series) Double Charged Matt Finish (Premium Quality) of approved colour & shade laid over 20mm thick Cement mortar 1:4 (1Cement :4 Coarse Sand) jointed and pointed in white cement mixed with colour to match the colour & shade of the tiles.	Sq.M	174.28	1670.00	291047.60
13	N.S-13	Providing & Fixing of Danpalon 16mm thick (with minimum1040mm wide) multicell polycarbonate sheet with standing seam on both sides & double tooth snap on locking system to ensure maximum uplift capability. The panels will be UV protected and antiglare/softlight. The cross section of one cell should not be more than 4mmX4mm & weight of single panel shall not be less than 3250 per square metre. The system will be fitted on purlins with spacing as specified by manufacturer.	Sq.M	93.32	5321.68	496619.18
14	N.S-14	Providing and fixing Ceramic Tiles 395x395mm (edge cut) Rustic Premium Quality of approved colour & shade laid over 20mm thick cement mortar 1:4 (1 cement :4 Coarse sand) jointed & pointed in white cement mixed with pigment to match the shade of the tile	Sq.M	2167.20	1132.00	2453270.40
15	N.S-15	Extra for providing and laying Ceramic Glazed Tiles 400x400mm tiles in lieu of 300x300mm Tiles	Sq.M	1034.20	174.00	179950.80
16	N.S-16	Providing and fixing factory made shutters with M.S. box tubular section 75x30x1.25mm thick in windows and ventilators Side/Top/Centre Hung joints mitred and flash butt welded to pressed steel frames of windows. Item should include handles, stays, tower bolts and Glass beading & wire gauge to be measured seperately.	kg	6854.40	90.00	616896.00
17	N.S-17	Supplying and applying 2mm thick surface texture in lineal finish of approved shade Over a base course of primer over plastered surface all as specified .	Sq.M	11698.64	425.00	4971922.00
18	N.S-18	Providing and fixing 18-19mm thick commercial Ply Mr Grade UF Bounded Ply Wood fixed to frame work.	Sq.M	3905.88	1333.00	5206538.04

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
19	N.S-19	Prelaminated MDF Board Shutters one side laminated and other side balancing	Sq.M	1701.60	1380.00	2348208.00
20	N.S-20	Providing & fixing 25mm thick Prelaminated Flush Shutter out side Lamination other side balancing lamination with necessary screws.	Sq.M	824.16	1909.00	1573321.44
21	N.S-21	Marble in Designer Slup	R.M	48000.00	28.66	1375680.00
22	N.S-22	STAINLESS STEEL FITTINGS				
	a	Providing and fixing S.S.Sliding door bolt size 16mmx300mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebco/Ozone/Dorma)	Nos	8.00	538.00	4304.00
	b	Providing and fixing S.S.Sliding door bolt size 16mmx250mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebco/Ozone/Dorma)	Nos	852.00	457.00	389364.00
	c	Providing & fixing S.S. tower bolt Size 250x12mm finish SS matt with necessary screws etc., complete.(Makes : Ebco/ Ozone/Dorma)	Nos	2128.00	269.00	572432.00
	d	Providing & fixing S.S. tower bolt Size 150X12mm" finish SS matt with necessary screws etc., complete.(Makes : Ebco/Ozone/ Dorma)	Nos	1008.00	150.00	151200.00
	e	Providing & fixing S.S. tower bolt Size 100x10mm finish SS matt with necessary screws etc., complete (Makes : Ebco/Ozone/Dorma)	Nos	1792.00	135.00	241920.00
	f	Providing & fixing S.S. handle size 25x150mm with necessary screws etc., complete. (Makes : Ebco/Ozone/Dorma)	Nos	3712.00	900.00	3340800.00
	g	Providing & fixing S.S. handle size 15x100mm with necessary screws etc., complete. (Makes : Ebco/Ozone/Dorma)	Nos	2576.00	646.00	1664096.00
	h	Providing & fixing S.S. handle size 10x75mm with necessary screws etc., complete. (Makes : Ebco/Ozone/Dorma)	Nos	896.00	450.00	403200.00
	i	Providing & fixing S.S.Door Stopper size 65x2.5MM finish SS Matt with necessary Screws etc., complete.(Makes : Ebco/Ozone/Dorma)	Nos	1240.00	300.00	372000.00
	j	Providing & fixing alu. Diecast body tubluor type universal hydraulic door closer with necessary crews etc. complete. (Makes : Ebco/ Ozone/Dorma)	Nos	1240.00	991.00	1228840.00
	k	Providing and fixing slide on 2333 Hinges O cracking with necessary screws in kitchen cabinets. (Makes : Ebco/Ozone/ Dorma)	Nos	3584.00	32.00	114688.00
	l	Providing and fixing Handle C Shape SS 4" with necessary screws. (Makes : Ebco/Ozone/Dorma)	Nos	1792.00	32.00	57344.00
					TOTAL [XVI]	51738990.62

PLUMBING WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	SANITARY INSTALLATIONS & C.P FITTINGS	2248892.80	2898880.00
ii	CI PIPES & FITTINGS	3528082.40	189440.00
iii	RAIN WATER PIPES & FITTINGS	1327689.00	74880.00
iv	WATER SUPPLY WORKS	2632025.65	10636550.00
v	EXTERNAL SEWRAGE	1608909.00	-
vi	EXTERNAL DRAINAGE	1530010.00	15200.00
	G.TOTAL	12875608.85	13814950.00

BILL OF QUANTITIES						
SECTION-B : INTERNAL PLUMBING WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
[i]		SANITARY INSTALLATIONS & C.P FITTINGS				
		DSR 2012 TEMS				
1		Providing and fixing wash basins with C.P. brass pillar tap, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls and floors where required.				
	17.7.1	White Vitreous china Wash basin of size 630 x 450mm with a pair of 15mm C.P brass pillar taps.	Each	256.00	1848.35	473177.60
2	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at back for the reception of pipes and fittings	Each	256.00	894.70	229043.20
3	17.22	Providing and fixing G.I. intel connection for fluse pipe connecting with W.C. pan.	Each	128.00	94.00	12032.00
4		Providing and fixing P.V.C. waste pipe for wash including P.V.C. waste fittings complete				
	17.28.1	Semi rigid pipe				
	17.28.1.1	32mm dia	Each	256.00	59.50	15232.00
	17.28.1.2	40mm dia	Each	64.00	66.45	4252.80
5	17.31	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.	Each	256.00	674.05	172556.80
6	17.33	Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame C.P. brass brackets and guard rail complete fixed with 40mm long screws, rawlplugs etc.complete.	Each	192.00	341.25	65520.00
7		Providing and fixing toilet paper holder:				
	17.34.1	CP brass	Each	128.00	250.95	32121.60
8		Providing and fixing C.P brass angle valve for basin mixer and geyser points of approved quality confirming to IS:8931				
	18.53.1	15 mm nominal bore	Each	1088.00	449.35	488892.80
9		Providing and fixing Salem 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 fitting and brackets, cutting and making good the walls wherever required.				
		kitchen sink with drain board				
	17.10.1.1	510x1040 mm bowl depth 250 mm.	Each	64.00	6743.55	431587.20
10	18.21	Providing and fixing unplasticised PVC connection pipe with brass unions				
	18.21.2	45 cm length				
11	18.21.2.1	15 mm nominal bore	Each	704.00	61.70	43436.80
12	18.22	Providing and fixing C.P. brass shower rose with 15 or 20mm inlet				
	18.22.2	150 mm diameter	Each	192.00	77.85	14947.20
13	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931				
	18.49.1	a) 15 mm nominal bore	Each	64.00	397.50	25440.00
14	18.5	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	18.51.1	a) 15 mm nominal bore	Each	384.00	411.40	157977.60
15	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	a) 15 mm nominal bore	Each	192.00	430.60	82675.20
		Total C/f to Summary		Total DSR ITEMS [i]		2248892.80
		NON SCHEDULE ITEMS				
1	NS	Providing and Fixing C.P. brass Ablution health faucet assembly with 1.2 m long braided PVC hose with mounting bracket fixed on wall complete including divertor and two way angle valve[FOR EWC]	Each	128.00	500.00	64000.00
2	NS	Providing & fixing 4 mm thick SS hinged grating with rim of approved design including setting in floor with cement mortar.				
	a)	125 mm dia	Each	512.00	240.00	122880.00
3	NS	Providing & Fixing CP brass liquid soap container fixed to the wall with PVC rubber plug with C.P brass screw complete Each	Each	256.00	900.00	230400.00
4	NS	Supplying and fixing Towel rail of size 600x20mm complete with bracket fixed to wooden cleats with CP brass screws.	Each	192.00	925.00	177600.00
5	NS	Providing and fixing CP brass Single lever wall mixer with spout of approved quality for Hot & cold bathing including cutting and making good the wall etc. complete.	Each	192.00	3500.00	672000.00
6	NS	Providing and fixing CP brass basin mixer of approved quality for Hot & cold water including cutting and making good the wall etc. complete.	Each	256.00	3000.00	768000.00
7		Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid 10 litre low level white vitreous china dual flushing cistern & C.P. flush bend with fittings & CI Brackets, 40 mm 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.	Each	128.00	5000.00	640000.00
8	NS	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast iron P or S trap, white vitreous china dual flushing cistern, including flush pipe, 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 580x440 mm with integral type foot rest.	Each	64.00	3500.00	224000.00
		Total C/f to Summary		Total NS ITEMS [i]		2898880.00
[ii]		CI PIPES & FITTINGS				
		DSR 2012 ITEMS				
1	17.35	Providing and fixing soil, waste and vent pipes :				
	17.35.1	100 mm dia.				
	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	RM	2400.00	857.30	2057520.00
2	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:				
	17.58.1	100 mm	Each	1500.00	207.85	311775.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
3	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 10x10x10cm 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	Each	1900.00	112.50	213750.00
4	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	Each	48.00	353.25	16956.00
5	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	Each	168.00	296.35	49786.80
6	17.4	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	Each	16.00	342.80	5484.80
7	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	100x100x100mm				
	17.43.1.2	Sand cast iron S&S as per IS-3989	Each	60.00	579.75	34785.00
8	17.44	Providing and fixing single equal plain junction of required degree.				
	17.44.1	100x100x100mm				
	19.44.1.2	Sand cast iron S&S as per IS-3989	Each	60.00	442.00	26520.00
9	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	Each	12.00	244.10	2929.20
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 :				
	17.60.1	100 mm inlet and 100 mm outlet				
	17.60.1.1	Sand cast iron S&S as per IS-3989	Each	168.00	801.70	134685.60
11	18.10 & 18.11	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. (internal work) Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall (for Waste Conn.from WB/Urinals/Sinks)				
i	(18.10.4+18.40.4+18.78)	32 mm dia nominal bore	RM	280.00	367.90	103012.00
ii	(18.10.5+18.40.5+18.78)	40 mm dia nominal bore	RM	280.00	436.60	122248.00
iii	(18.10.6+18.40.6+18.78)	50 mm dia nominal bore	RM	850.00	527.80	448630.00
		Total C/f to Summary			Total DSR ITEMS [ii]	3528082.40
		NON SCHEDULE ITEMS				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	NS	Providing and fixing G.I Inlet fitting with maximum 3 inlets 32, 40 or 50 mm size fabricated from 100 mm dia G.I pipes(approx. length=150mm to 300mm) and welded G.I sockets, fixed to CI trap with lead caulked joint and set in cement concrete as per standard drawing including cost of Bitumastic paint complete.	Each	256.00	500.00	128000.00
2	NS	Providing & fixing 100X50 mm. dia. G.I elbow (drain point) in the toilet floor including 100 mm dia. C.P. waste jali complete as required.	Each	256.00	240.00	61440.00
		Total C/f to Summary		Total NS Items [ii]		189440.00
[iii]		FOR RAIN WATER:				
1	17.35	Providing and fixing soil, waste and vent pipes:				
	17.35.1	100mm dia				
	17.35.1.1	Sand cast iron S&S as per IS-1729	RM	1400.00	734.30	1028020.00
2	17.58	Providing lead Caulked joints to sand cast iron/centrifugally cast (spun) iron pipes & fittings of diameters.				
	17.58.1	100 mm	Each	1000.00	207.85	207850.00
3	17.37	Providing & fixing M. S. holder - bat clamps of approved design to sand Cast iron/cast iron (spun) pipe embedded in & including cement concrete blocks 10*10*10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). Including cost of cutting holes&making good the walls etc.				
	17.37.1	For 100 mm dia pipe	Each	600.00	112.50	67500.00
4	17.57	Providing & fixing coller				
	17.57.1	100 mm dia				
	17.57.1.1	Sand Cast iron S&S as per IS:1729	Each	100.00	177.85	17785.00
5	12.22	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 end making and finishing the outlet complete.	Each	36.00	148.75	5355.00
6	12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	Each	36.00	32.75	1179.00
		Total C/f to Summary				1327689.00
		(NON-DSR)				
1	NS	Providing and fixing cast brass clean out plug with suitable insert keys for opening in brass cap, male threaded joint/reducer with G.I. socket caulked to Pipe/fittings of CI pipe /Floor trap including cost of lead joints etc. complete in all respect.				
	i	100 mm dia.	Each	128.00	585.00	74880.00
		Total C/f to Summary		Total DSR Items [iii]		74880.00
[iv]		WATER SUPPLY WORKS				
		DSR 2012 ITEMS				
		COLD WATER SUPPLY:				
		C.P.V.C PIPES				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	18.8	Providing & 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 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,				
i	18.8.1	15 mm nominal outer dia pipes	RM	840.00	218.65	183666.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	560.00	243.05	136108.00
iii	18.8.3	25 mm nominal outer dia pipes	RM	336.00	297.95	100111.20
iv	18.8.4	32 mm nominal outer dia pipes	RM	132.00	358.90	47374.80
		Internal work - Exposed on wall				
2	18.7	Providing & 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.				
i	18.7.2	20mm dia. nominal bore	RM	65.00	157.15	10214.75
ii	18.7.3	25mm dia. nominal bore	RM	192.00	197.90	37996.80
iii	18.7.4	32mm dia. nominal bore	RM	160.00	252.65	40424.00
iv	18.7.5	40mm dia. nominal bore	RM	232.00	348.25	80794.00
v	18.7.6	50mm dia. nominal bore	RM	185.00	514.35	95154.75
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.	Each	248.00	450.90	111823.20
ii	18.17.3	40 mm nominal bore	Each	32.00	546.05	17473.60
iii	18.17.4	50 mm nominal bore	Each	8.00	780.60	6244.80
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.2	20 mm nominal bore.	Each	224.00	360.20	80684.80
ii	18.18.3	25 mm nominal bore	Each	234.00	421.65	98666.10
		External work				
5	18.9	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, This includes jointing of pipes & fittings with one step CPVC solvent cement , trenching , refilling and testing of joints complete as per direction of Engineer in charge.				
i	18.9.7	62.5 mm dia. nominal inner dia pipes	RM	100.00	1326.35	132635.00
6	18.12	Providing and fixing G.I. pipe complete with G.I fittings including trenching and refilling etc.				
	18.12.7	65 mm dia nominal bore	RM	40.00	1326.35	53054.00
	18.12.8	80 mm dia nominal bore	RM	25.00	1326.35	33158.75

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
7	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 100*100*75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm 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) 12 mm thick finished with a floating coat of neat cement complete as per standard design:				
i	18.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	4.00	908.95	3635.80
		Total C/f to Summary		Total DSR Items [iv]		1269220.35
		NON SCHEDULE ITEMS				
		Internal work - Exposed on wall				
7		Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stability for hot & cold wter supply, includign 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.				
i		100mm dia. nominal bore	RM	65.00	850.00	55250.00
ii		150mm dia. nominal bore	RM	20.00	1000.00	20000.00
8		Providing and fixing PN 16 Butterfly valve of the following dia				
i		150mm dia. nominal bore	RM	1.00	2500.00	2500.00
9	NS	Providing and fixing Puddle flanges fabricated out of 600mm long GI/MS pipe welded with 6mm thick M S plates along with flanges of suitable size and properly fixed in walls and top slabs of OHT / UGT complete.				
	i	50mm dia	Each	20.00	325.00	6500.00
	ii	80mm dia	Each	16.00	700.00	11200.00
10	NS	Providing & fixing of hand lever operated forged brass body full way ball valve type isolating valve having forged brass hard chrome plated mirror finish ball, steel handle with PVC grip, teflon seat, screwed ends tested to a pressure of 15 kg/sqcm complete.				
i		65 mm nominal bore	Each	1.00	1500.00	1500.00
11	NS	Providing and fixing 600 mm long MS Heavy Class puddle flanges fabricated out of 6 mm thick M.S. plates of suitable size properly fixed in walls & top slab of tanks of following diameters				
i		25 mm dia	Each	400.00	1500.00	600000.00
ii		32 mm dia	Each	400.00	2000.00	800000.00
iii		50 mm dia	Each	400.00	2500.00	1000000.00
iv		80 mm dia	Each	400.00	3000.00	1200000.00
v		100 mm dia	Each	400.00	3500.00	1400000.00
vi		150 mm dia	Each	40.00	4000.00	160000.00
		Total C/f to Summary		Total NS Items [iv]		5256950.00
		HOT WATER SUPPLY:				
		C.P.V.C PIPES				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	18.8	Providing & 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 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,				
i	18.8.1	15 mm nominal outer dia pipes	RM	840.00	218.65	183666.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	616.00	243.05	149718.80
iii	18.8.3	25 mm nominal outer dia pipes	RM	115.00	297.95	34264.25
		Internal work - Exposed on wall				
2	18.7	Providing & 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.				
i	18.7.2	20mm dia. nominal bore	RM	128.00	157.15	20115.20
ii	18.7.3	25mm dia. nominal bore	RM	240.00	197.90	47496.00
iii	18.7.4	32mm dia. nominal bore	RM	200.00	252.65	50530.00
iv	18.7.5	40mm dia. nominal bore	RM	170.00	348.25	59202.50
v	18.7.6	50mm dia. nominal bore	RM	185.00	514.35	95154.75
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.	Each	16.00	450.90	7214.40
ii	18.17.3	40 mm nominal bore	Each	10.00	546.05	5460.50
iii	18.17.4	50 mm nominal bore	Each	108.00	780.60	84304.80
iv	18.17.5	65 mm nominal bore	Each	90.00	1073.25	96592.50
v	18.17.6	80 mm nominal bore	Each	80.00	1832.95	146636.00
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.2	20 mm nominal bore.	Each	112.00	360.20	40342.40
ii	18.18.3	25 mm nominal bore	Each	62.00	421.65	26142.30
		Total C/f to Summary		Total DSR Items [iv]		1046840.40
		NON SCHEDULE ITEMS				
		Internal work - Exposed on wall				
5		Providing & 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.				
i		65mm dia. nominal bore	RM	120.00	625.00	75000.00
ii		80mm dia. nominal bore	RM	45.00	700.00	31500.00
iii		100mm dia. nominal bore	RM	100.00	850.00	85000.00
iv		150mm dia. nominal bore	RM	20.00	1000.00	20000.00
6		Providing and fixing PN 16 Butterfly valve of the following dia				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i		150mm dia. nominal bore	RM	1.00	2500.00	2500.00
7		Providing and fixing Puddle flanges fabricated out of 600mm long GI/MS pipe welded with 6mm thick M S plates along with flanges of suitable size and properly fixed in walls and top slabs of OHT / UGT complete.				
i		65mm dia	Each	4.00	325.00	1300.00
ii		150mm dia	Each	4.00	700.00	2800.00
8		Providing & fixing of hand lever operated forged brass body full way ball valve type isolating valve having forged brass hard chrome plated mirror finish ball, steel handle with PVC grip, teflon seat, screwed ends tested to a pressure of 15 kg/sqcm complete.				
i		65 mm nominal bore	Each	1.00	1500.00	1500.00
9		Providing and fixing 600 mm long MS Heavy Class puddle flanges fabricated out of 6 mm thick M.S. plates of suitable size properly fixed in walls & top slab of tanks of following diameters				
i		25 mm dia	Each	400.00	1500.00	600000.00
ii		32 mm dia	Each	400.00	2000.00	800000.00
iii		50 mm dia	Each	400.00	2500.00	1000000.00
iv		80 mm dia	Each	400.00	3000.00	1200000.00
v		100 mm dia	Each	400.00	3500.00	1400000.00
vi		150 mm dia	Each	40.00	4000.00	160000.00
		Total C/f to Summary			Total NS Items [iv]	5379600.00
		FLUSHING WATER SUPPLY:				
		C.P.V.C PIPES				
1	18.8	Providing & 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 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,				
i	18.8.1	15 mm nominal outer dia pipes	RM	180.00	218.65	39357.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	340.00	243.05	82637.00
		Internal work - Exposed on wall				
2	18.7	Providing & 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.				
i	18.7.1	15mm dia. nominal bore	RM	65.00	133.95	8706.75
ii	18.7.2	20mm dia. nominal bore	RM	200.00	157.15	31430.00
iii	18.7.3	25mm dia. nominal bore	RM	220.00	197.90	43538.00
iv	18.7.4	32mm dia. nominal bore	RM	115.00	252.65	29054.75
v	18.7.5	40mm dia. nominal bore	RM	100.00	348.25	34825.00
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i	18.17.2	32 mm nominal bore.	Each	8.00	450.90	3607.20
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.1	15 mm nominal bore.	Each	56.00	258.05	14450.80
ii	18.18.2	20 mm nominal bore.	Each	60.00	360.20	21612.00
iii	18.18.3	25 mm nominal bore	Each	16.00	421.65	6746.40
		Total C/f to Summary		Total DSR Items [iv]		315964.90
IV		EXTERNAL SEWERAGE				
1.0	2.10	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, with in a lead of 50 m:				
		All kinds of soil.				
i	2.10.1.2	Pipes, cable etc. exceeding 80 mm dia but not exceeding 300 mm dia.	RM	1240.00	165.60	205344.00
2.0	19.1	Providing, laying and jointing glazed stone ware pipes grade 'A' 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	RM	280.00	219.05	61334.00
i	19.1.3	200 mm diameter	RM	440.00	323.05	142142.00
	19.1.4	250 mm diameter	RM	520.00	446.15	231998.00
3.0	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.				
i	19.3.2	150 mm diameter	RM	280.00	382.75	107170.00
	19.3.3	200 mm diameter	RM	440.00	449.90	197956.00
	19.3.4	250 mm diameter	RM	520.00	523.75	272350.00
4.0	19.4.2.1	Providing and fixing square mouth S. W. Gully trap grade 'A' complete with C.I. grating brick masonry chamber with F.P.S bricks and water tight CI cover with frame of 300 x 300 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	Each	40.00	1278.30	51132.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
5.0	19.7	Constructing brick masonry manhole in cement mortar 1 : 4 (1 cement : 4 coarse sand) RCC top slab with 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 grade stone aggregate 20mm nominal size); foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1cement 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design				
	19.7.1	Inside size 90 x 80 cm & 45 cm deep including CI cover with frame (light duty) 455 x 610mm internal dimension total wt. of cover & frame to be not less than 38 kg (wt. of cover 23 kg and wt. of frame 15 kg)				
	19.7.1.1	With F.P.S. bricks with class designation 75	Each	44.00	7132.00	313808.00
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	100.00	256.75	25675.00
		Total Carried to DSR Items				1608909.00
V		EXTERNAL DRAINAGE				
1.0	2.10	Excavating trenches in all kind of soil of required width for pipes. including excavation for sockets and dressing of sides, ramming of bottoms, including getting out the excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating Each deposited layer by ramming, watering, etc & disposing of surplus excavated soil as directed within a lead of 50m.				
		up to 1.50 m depth				
i	2.10.1.2	Pipes 80 mm to 300 mm diameter	RM	480.00	165.60	79488.00
2.0	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 RCC Pipes including bed concrete as per standard design.				
i	19.3.2	150 mm diameter	RM	120.00	382.75	45930.00
ii	19.3.4	250 mm diameter	RM	360.00	523.75	188550.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
3.0	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 (1cement :2 fine sand) including testing of joints etc complete.				
i	19.6.2	150 mm diameter R.C.C pipes	RM	120.00	254.50	30540.00
ii	19.6.3	250 mm diameter R.C.C pipes	RM	360.00	342.45	123282.00
iii	19.6.4	300 mm diameter R.C.C pipes	RM	240.00	422.90	101496.00
iv	19.6.6	500 mm diameter R.C.C pipes	RM	195.00	722.20	140829.00
v	19.6.7	600 mm diameter R.C.C pipes	RM	120.00	1084.25	130110.00
4.0	19.9.1.1	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), inside plastering 12 mm thick with cement mortar 1:3 (1cement 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 40 mm nominal size) <i>and making necessary channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design</i>				
		0.91 m deep with SFRC cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to IS : 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 20 mm 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) with F.P.S.bricks class designation 75	Each	60.00	7007.40	420444.00
5.0	19.10.1	Extra for depth for circular manhole 0.91m internal dia at bottom with beyond 0.91m to 1.67m.				
		With FPS Bricks class designated 75	RM	20.00	3498.25	69965.00
6.0	19.27.1	Constructing brick masonry road gully chamber 50 x 45 x 60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500 x 450mm precast RCC horizontal grating with frame complete as per standard design				
		With FPS bricks	Each	56.00	3193.50	178836.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	80.00	256.75	20540.00
		Total Carried to DSR Items				1530010.00
		NON DSR				
1		Constructing grease trap 80 x 40 x 46cm (inside) with one brick thick brick masonry wall with inlet and outlet drain with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 fine sand) plastered 12mm thick with 1:4 (1 cement: 4 coarse sand) finished with a floating coat of neat cement on inside and exposed surfaces having two stone baffled walls 34.5 cm deep and third one 19cm deep, each 40mm thick and 45 cm long embedded 2.5 cm on either side in brick masonry, 40mm thick 100 x 60 cm stone cover and 7.5 cm thick bed concrete 1:5:10 (1 cement : 5 fine sand: 10 graded stone aggregate 40mm nominal size) with 40mm flooring in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) with a floating coat of neat cement including all earth excavation, refilling and disposal of surplus earth complete as per standard design	Each	16.00	3500.00	56000.00
		Total Carried to NON DSR Items				15200.00

ELECTRICAL WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	INTERNAL ELECTRICAL WORKS	11585513.00	15655755.00
	Total C/F To Summary	11585513.00	15655755.00

BILL OF QUANTITIES						
SECTION-C : INTERNAL ELECTRICAL WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		DSR ITEMS				
1.0		Point wiring in PVC conduit, with modular type switch :-				
		Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.				
i	1.10.2	Group B	Point	3586.00	544.00	1950784.00
2.0	1.11	Wiring for twin control light point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with 2 Way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.	Point	20.00	710.00	14200.00
3.0		Sub main wiring in PVC conduit :-				
		Wiring for Submain/ Circuit wiring alongwith earth wire with the following sizes of PVC insulated, copper conductor single core cable in surface/ recessed PVC conduit as required.				
i	1.14.2	2 x 2.5 sq.mm. +1 x 2.5 sq.mm. Earth wire	RM	12500.00	131.00	1637500.00
ii	1.14.3	2 x 4 sq.mm. +1 x 4 sq.mm. Earth wire	RM	3500.00	162.00	567000.00
iii	1.14.4	2 x 6 sq.mm. +1 x 6 sq.mm. Earth wire	RM	1680.00	206.00	346080.00
iv	1.14.11	4 x 10 sq.mm. + 2 x 10 sq.mm. Earth wire	RM	2000.00	562.00	1124000.00
v	1.14.12	4 x 16 sq.mm. + 2 x 16 sq.mm. Earth wire	RM	2000.00	789.00	1578000.00
4.0		S/F Modular type electronic fan regulator :-				
	1.25	Supply and fixing of stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	384.00	322.00	123648.00
5.0		S/F Modular type blanking plate :-				
	1.26	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	10.00	22.00	220.00
6.0		S/F MODULAR BOXES, BASE & COVER PLATE :-				
		Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required				
i	1.27.1	1 or 2 Module (75 mm x 75 mm)	Each	128.00	142.00	18176.00
ii	1.27.2	4 Module (125 mm x 75 mm)	Each	128.00	154.00	19712.00
7.0		S/F MODULAR TYPE SWITCH / SOCKET :-				
		Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required				
i	1.24.1	5/6 amps switch	Nos	1000.00	75.00	75000.00
ii	1.24.4	3 pin 5/6 amp. Socket outlet	Nos	1000.00	96.00	96000.00
iii	1.24.6	Telephone Socket outlet	Each	128.00	89.00	11392.00
iv	1.24.7	TV Antenna Socket outlet	Each	128.00	93.00	11904.00
v	1.24.8	Bell Push	Each	64.00	98.50	6304.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
8.0		Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
i	1.21.1	20 mm.	RM	3500.00	56.50	197750.00
ii	1.21.2	25 mm.	RM	10000.00	64.50	645000.00
iii	1.21.3	32 mm	RM	2500.00	80.50	201250.00
iv	1.21.4	40 mm	RM	1000.00	106.00	106000.00
v	1.21.5	50 mm	RM	200.00	135.00	27000.00
9.0		Supply and drawing telephone wire of following pair, 0.5 sq.mm. FR PVC insulated copper conductor, unArmoured telephone cable in the existing surface / recessed conduit as required.				
	1.18.2	2 Pair	RM	4480.00	15.50	69440.00
10.0		S/F power plug point with all accessories :-				
	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 1 nos. 3 pin 5/6 amps modular socket outlet and one no. 5/6 amps modular switch, connection, painting etc. as required.	Each	2112.00	288.00	608256.00
11.0		S/F power plug point with all accessories :-				
	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5/6 amps modular socket outlet and 15/16 amps modular switch, connection, painting etc. as required.	Each	528.00	366.00	193248.00
12.0		Supplying and fixing 5 amps. to 32 amps. rating, 240 volts 'C' series, miniature circuit breaker (MCB) suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.10.1	Single pole	Each	1622.00	141.00	228702.00
13.0		Supplying and fixing following rating, double pole, (single phase and neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current Poin upto 300 miliampere in the existing MCB DB complete with connections,testing and commissioning etc. as required :				
i	2.14.1	25 amps	Each	64.00	1318.00	84352.00
14.0		Supplying and fixing following way, prewired SP & N MCB distribution board of sheet steel for 240 volts,on surface /recess, complete with loose wire box,terminal blocks,duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar,neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.7.4	2 + 4 way Double Door	Each	64.00	2152.00	137728.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
15.0	2.18	Supplying and fixing 20 amps , 240 volts, SPN, industrial type socket outlet , with 2 poles and earth metal enclosed plug top along with 20 amps. "C" series, SP MCB in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	Each	192.00	693.00	133056.00
16.0		Supplying and fixing following way, prewired TP & N MCB distribution board of sheet steel for 415 volts, on surface /recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.8.5	4 way (4 + 12), Double door, horizontal type	Each	2.00	6345.00	12690.00
ii	2.8.6	6 way (4 + 18), Double door, horizontal type	Each	1.00	8197.00	8197.00
iii	2.8.7	8 way (4 + 24), Double door, horizontal type	Each	64.00	8984.00	574976.00
17.0		Supplying & fixing following rating, four pole (three phase & neutral), 415 volts residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.15.1	25 Amp.	Each	1.00	1679.00	1679.00
ii	2.15.2	40 Amp.	Each	66.00	1703.00	112398.00
18.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc, with coke and salt) as required.	Set	8.00	3996.00	31968.00
19.0	5.9	Supplying and laying 25 mm x 5 mm. G.I. strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of GI nut bolts & spring washer spaced at 50 mm)	RM	64.00	97.50	6240.00
20.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
21.0	2.21	Providing and fixing M.V. danger notice plate of 200mmx150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	Each	8.00	121.00	968.00
22.0	1.35	Erection of wall bracket / ceiling fittings of all sizes and shapes containing upto two GLS lamps per fitting, complete with all accessories including connections etc. as required.	Each	676.00	39.00	26364.00
23.0	1.41	Installation, testing and commissioning of prewired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tubes etc. directly on ceiling / wall, including connection with 1.5 sq. mm. PVC insulated, copper conductor, single core cable etc. as required.	Each	2014.00	69.50	139973.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
24.0	1.45	Installation, testing and commissioning of ceiling fan including wiring the down rod of standard length (upto 30 cm.) with 1.5 sq. mm. FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Each	384.00	99.00	38016.00
25.0	1.50.1	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connections, testing, commissioning etc. as required.	Each	256.00	163.00	41728.00
26.0	1.51	Extra for fixing the louvers / shutters complete with frame fro exhaust fans of all sizes.	Each	256.00	68.50	17536.00
27.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	405.00	40500.00
ii	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	464.00	46400.00
iii	4.1.3	300 mm width X 50 mm depth X 1.6 mm thickness	RM	80.00	677.00	54160.00
28.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
	9.1.30	3.5 X 300 sq. mm (70mm)	Each	10.00	867.00	8670.00
	9.1.29	3.5 X 240 sq. mm (62mm)	Each	8.00	771.00	6168.00
	9.1.33	4 x 16 sq. mm (28mm)	Each	20.00	188.00	3760.00
	9.1.32	4 x 10 sqmm (25 mm)	Each	2.00	146.00	292.00
29.0	7.5	Laying of one number PVC insulated and PVC sheathed / XLPE power cab le of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.5.4	Above 185 sq. mm and upto 400 sq. mm	RM	900.00	44.00	39600.00
30.0	7.8	Laying of one number PVC insulated and PVC sheathed / XLPE power cab le of 1.1 KV grade of following size on cable tray as required.				
	7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	RM	650.00	16.50	10725.00
	7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	RM	100.00	72.50	7250.00
31.0	8.5	Laying of one number XLPE power cab le of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.				
	8.5.2	Above 120 sq. mm. and upto 400 sq. mm.	Metre	250.00	231.00	57750.00
32.0		Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	3.00	14225.00	42675.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
33.0		Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	1.00	19128.00	19128.00
	Total carried to DSR Items				Rs.	11585513.00
II)	NON SCHEDULED ITEMS					
		S/F power plug point with all accessories :-				
1.0		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing Two nos. 3 pin 5/6 amps modular socket outlet and One no. 5/6 amps modular switch, connection, painting etc. as required.	Each	392.00	300.00	117600.00
2.0		Supply and installation of plug-in-type telephone socket outlet with 1.2mm thick outlet box and cover plate complete as required in 3 module plate (1 socket with 2 blank plate).				
		RJ - 11	Each	256.00	120.00	30720.00
3.0		Supply, installation, testing and commissioning of Cat - 6 flush mounted information outlets wired according to T568B standard with a faceplate. The plastic shall be high impact, flame retardant & UL-rated thermoplastic with minimum insulation.				
		Single surface mount/recessed box with jacks (RJ-45) I/O	Each	256.00	125.00	32000.00
4.0		Supply, laying, testing and commissioning of 4 pair Cat - 6 non plenum cable of 24 AWG solid copper conductors in existing conduits.	Rm	3360.00	30.00	100800.00
5.0		Supplying, fixing, connecting & testing of Telephone Tag Block krone type in a suitable size 1.6 mm thick dust and vermin proof Sheet steel enclosure duly painted by synthetic enamel over anti corrosive primer, lockable and hinged cover with provision for cable through glands complete in all respects.				
i		40 pair krone	Each	4.00	600.00	2400.00
6.0		Supplying and Earthing with Cu earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc, with coke and salt) as required.	Set	8.00	6000.00	48000.00
7.0		Providing & fixing 50mm x 6mm G.I. strip on surface or in recess for connections etc. as required.	Rm	100.00	150.00	15000.00
8.0		Providing & fixing 50mm x 6mm Cu. strip on surface or in recess for connections etc. as required.	Rm	100.00	1000.00	100000.00
9.0		S/F of hexagonal fan box with hexagonal side of approx. 80 mm.in length fabricated from 14 SWG M.S. sheet incorporating with 10 mm. dia. M.S. round bar duly bent for supporting fan hanger painted with red oxide and screwing arrangement with wiring conduit laid in the R.C.C. roof before concreting along with supply of all materials, labour, T&P etc. for proper completion of work.	Each	384.00	250.00	96000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
10.0		Supply, laying, jointing, testing and commissioning of ISI marked (IS : 14930, part 2) H.D.P.E. (DWC) Double wall Corrugated pipe for cable laying having corrugation on outer wall and plain smooth surface at inner side including transportation uPointo the site, jointing, providing and fixing all fittings i.e. sockets, couplers, reducers, end caps etc to complete the works in all respects.				
i		300 mm. ID	RM	600.00	800.00	480000.00
11.0		Supply of wall mounted mirror light fixtures complete as per standard item with copper wiring and GLS / CFL lamps as required as per the standard catalogue item approved by engineer-in-charge.				
i		1 x 11 W	Each	192.00	700.00	134400.00
12.0		Supply of wall / ceiling surface mounted T5 fluorescent tube light luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required each fluorescent tube etc complete as required as per the standard catalogue item as approved by engineer-in-charge . power factor shall not be less than 0.95 and THD shall be less than 10%				
i		1 x 18 watt (BBS170 1xDLED -5000 PSU WH) 15 W LED Downlighter	Each	1632.00	2100.00	3427200.00
ii		1 x 28 W T5 (CRCA Body)(TMS122 M 1xTL5-28W EBT)	Each	834.00	1170.00	975780.00
iii		Bulk Head Light	Each	64.00	700.00	44800.00
13.0		Supplying of 240V, 1 phase Ceiling Fans complete with suitable length down rod as required. The fan should be five star rating as per BEE.				
i		1200mm sweep	Each	384.00	1300.00	499200.00
14.0		Supplying of 240V, 1 phase Exhaust fans with 1.5 Sqmm insulated copper conductor wires for connections complete as required. The exhaust fan should be five star rating as per BEE.				
		450mm sweep	Each	256.00	1150.00	294400.00
15.0		Supplying testing & commissioning for following size of XLPE aluminium conductor armoured cable of 1.1 KV grade as required.				
i		3.5 Core 300 sq. mm. Armoured Aluminium cable.	RM	200.00	1407.00	281400.00
ii		3.5 Core 240 sq. mm. Armoured Aluminium cable.	RM	800.00	1155.00	924000.00
iii		4 x 16 sq.mm. Armoured Aluminium cable.	RM	500.00	151.90	75950.00
iv		4 x 10 sqmm Armoured Aluminium cable.	RM	150.00	140.70	21105.00
16.0		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Following Panels, fabricated out of 14/16 Gauge CRCA sheet steel in cubicle compartmentised modular construction complete with supporting rigid structure, interconnections, aluminium bus bar strip with heat strinkable colour coded current density of bus bar 0.8 A per sqmm Identification on all breakers & MCCB to indicate the area they serve. Degree of protection IP 42, earthing hinged doors with 2.5 sqmm tinned braded copper wire, free standing floor mounted with removable Gland Plates on top & bottom of the panel, all mounting plates shall be GI sheets. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. Galvanised hardwares with zinc passivation shall be used in fabrication of panels 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		All Panel's outgoing have to be equipped with KWH energy meter.				
i		Main LT Panel				
		Incoming: (Transformer)				
		One (1) Nos.1250A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-1250A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		1600A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Each. 630A TPN MCCB				
		Four (4) Each. 250A TPN MCCB				
		One (1) Each. 200A TPN MCCB				
		One (1) Each. 100A TPN MCCB				
		Two (2) Each. 63A TPN MCCB				
		Two (2) Each. 40A TPN MCB	Set	1.00	350000.00	350000.00
ii		Capacitor Panel (250 KVAR)				
		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Automatic control panel with capacitgors, fabricated out of 2 mm thick CRCA sheet steel in cubicle compartmentised modular construction, free standing floor mounted. Cable gland plates shall be provided on top the panels. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system. Galvanised hardwares with zinc passivation shall be used in fabrication of panels.				
		Incoming				
		630 Amps FP electrically operated fully drawout type air circuit breaker as per specification and with following accessories:				
		96 x 96 sqmm 0-630 A digital Ammeter with selector switch, CTs				
		Phase indicating light shall be protected by 2 Amps SP MCBs – 3 sets				
		Power factor compensating relay (including power factor meter) in 7 steps for automatic cut off or add on capacitor units to keep the power factor at 0.97 with variation of loads. All associated auxiliary contactors / relays / timer / auto manual selector switches to be provided – 1 set				
		Bus Bars				
		800 Amps TPN aluminium bus bars with coloured heat shrinkable insulated sleeves – 1 set				
		Outgoing				
		Outgoing feeders consisting of following accessories :				
		3 Sets – 160 Amps TP MCCB, capacitor duty contactors & 50 KVAR heavy duty capacitors.				
		4 Sets – 63 A TP MCCBs, capacitor duty contactors & 25 KVAR heavy duty capacitors.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Auto Manual Selector switch push button and indicating lamps. – 7 Sets	Set	1.00	300000.00	300000.00
iii		External Feeder panel				
		Incoming:-				
		(1) No. 63A FP MCCB (35 KA).				
		Metering:				
		One (1) No. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) No. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each.32A TPN MCB	Set	1.00	150000.00	150000.00
iv		Meter Board Panel				
		Incoming:				
		One (1) Nos.250A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-250A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		315A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Seventeen (17) Nos.40A TPN MCB				
		The Distribution board shall also be with and suitable housing 17 Nos. 3 phase electronic type KWHR meters and One number 40A TPN MCB after individual meter. All meters to be provided at one half of Metering Panel with transparent & locable acrylic cover. The respective MCB's shall be in another half of Metering Panel. The work should be complete including connecting Meter & MCB's by MS flexible conduits for connecting wires.	Set	4.00	500000.00	2000000.00
v		Basement Panel				
		Incoming:				
		One (1) Nos.63A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Three (3) Nos.40A TPN MCB				
		Three (3) Nos.25A DP MCB	Set	4.00	45000.00	180000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
17.0		Supply, Installation, testing, Commissioning of LPI Stormaster ESE type advance lightning protection complete with the lightning air terminal - Configured as a Spheroid which is comprised of separate electrically isolated 4 panels surrounding an Earthed Central Finial. The Insulation material used to electrically isolate the panels shall be comprised of a base polymer which provides high Ozone & UV resistance with di-electric strenght of 24-38 KV/mm tested as per NFC 17-102 & IEC 60-1:1989. The ESE teRminal shall not contain any electronic circuits or any moving parts for its operation. The ESE teRminal shall be tested & certified by CPRI (Central Power Research Institute, Govt of India) for the Impulse current of 45 KA (8/20 micro sec) with 5 positive & 5 negative impulse. The ESE teRminal shall be approved by DGMS (Director General of Mines Safety), Govt of India.				
i		Model: Stormaster 60	Each	1.00	175000.00	175000.00
ii		LPI Upper Termination Kit	Each	1.00	30000.00	30000.00
iii		LPI Lower Termination Kit	Each	1.00	4500.00	4500.00
iv		FRP Mast (2mtr) with Inline Coupling Unit	Each	1.00	20000.00	20000.00
v		GI Mast (3 mtr) with guy wire kit	Each	1.00	10500.00	10500.00
18.0		Supply, Installation, testing, Commissioning of J K Maintenance Free Chemical Gel Earthing - Dual Pipe (GI) Technology of "JK CHENSODE" 3mtr long 80mm dia permanantly sealed at both the ends with the lead terminal at the top along with 50 kgs of duly filled with metallic conducting compound permanantly sealed at both the ends with the lead teRminal at the top along with 50 kgs of "RESLOW" grounding minerals duly tested & certified by CPRI. The earth pit chamber shall be of heavyduty Polyplastic earth pit cover.	Each	2.00	20000.00	40000.00
19.0		Supply, Installation, testing, Commissioning of specially designed lightning current LPI High Voltage Shielded Cable (HVSC) 7 layer cable consisting of Inner Core, Concentric Conductor (copper), Inner binding tape, Insulation material, Metallic screen, Outer binding tape, Outer sheath with the nominal cross sectional area of 50 sq.mm & overall diameter of 37mm with the insulation resistance of 1830 M Ohm-km, tested for 200 KV as per IEC 600601 connected to the Stormaster terminal with the factory upper termination & connected to the earth pit with the lower terminal kit to safely route the lightning current.	Rm	80.00	4000.00	320000.00
20.0		H.V. PANEL (11 KV - VCB PANEL)				
		Supply, installation, testing & commissioning of indoor type floor mounted metal clad, IP 52, 33 KV VCB panel with 3 nos VCB (1 incomer and 2 out goings), totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS : 13118, as ammended upto date and additional specifictions, having capacities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker suitable for use on 33 KV, 3 Phase, 50 Hz A. C. supply with short circuit fault level of 1000 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated Aluminium alloy bus bars of suitable fault level, G.I. earth bar, earth bar, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil, control voltage of 24 Volt DC, TNC, LED type indicating lamps for phases and trip conditions and auxiliary switch of 6 NO + 6 NC and equipped with following switchgears and accessories.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		The panel should be suitable for connections for up to 3 x 300 sq.mm XLPE 33 KV cable (cable entry from bottom), end termination with heat shrinkable jointing material etc. as required. (The Cost of end termination not included in this item)				
		power pack (1 working & 1 standby) with 220 Volt AC input & 24 Volt DC continuous output suitable for indicating lights & closing / tripping / indication of 3 Nos. HT panel boards with 2 Nos. 12 Volts each maintenance free batteries of suitable AH each, charging unit, capacitor bank for emergency delivering for trip system complete with suitable capacity of Ammeter & Voltmeter i/c connections with 2.5 sq.mm FRLS insulated copper conductor cable etc. including DC DB consisting of 8 nos 32 Amp DP MCB's for DC supply distribution to panels as required.				
		Incoming - 1 No. 630 Amp. VCB with followings -				
		(a) 1 set (3 nos) 33 KV / v3 / 110 / v3 Volts drawout type PT Class 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering.				
		(b) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-0.5 for metering and class 5P10 for protection.				
		(c) 1 No. - (0-200A) Ammeter, analog type with selector switches.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay				
		(f) Microprocessor based numerical relay with IDMT setting for O/L, E/F and S/C protection.				
		(g) Restricted earth fault relay				
		(h) Over and Under voltage relay.				
		(i) Timer and TNC switch				
		Outgoing - 2 Nos. - 630 A VCB with followings in each breaker -				
		(a) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-1 for metering and class 5P10 for protection.				
		(b) (0-200A) Ammeters, dual scale analog type & selector switches for ammeters.				
		(c) Microprocessor based numerical relay with IDMT & instantaneous element for O/L, E/F and S/C protection.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay	Sets	1.00	1500000.00	1500000.00
21.0		Supply of 3 core stranded aluminium conductor 33 KV grade XLPE (E) (Cross linked Polyethylene) insulated PVC bedded, Galvanised flat steel strip armoured cable confirming to IS : 7098 (part II with latest amendments)				
		240 sq. mm 3 core	RM	250.00	6500.00	1625000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
22.0		Design, manufacture, testing at works supply, installation, testing and commissioning at site 33 KV/440V, 3 phase, 50 Hz, delta/star connected, outdoor type following sizes of transformers, oil immersed ONAN cooled, complete with all fittings such as oil conservator, silica gel breather, thermometer, explosion vent, Local ON LOAD tap changer with RTCC for +5% & -15% tapplings in step of 1.25 bidirectional roller, diagram & rating plate, oil temperature indicator, winding temperature indicator and buccholtz relay with wiring upto marshalling box, lifting lugs, first filling of oil, weather proof HT cable box, LT bus duct disconnecting chamber minimum 8 mm thick non magnetic gland plate etc. complete as per specification including 10% extra oil in non returnable drum for topping up as required. (The transformer shall be subject to all tests specified in the specifications and test certificates shall be produced).				
		750 KVA	No.	1.00	1250000.00	1250000.00
		TOTAL FOR NON DSR ITEMS				15655755.00

BILL OF QUANTITIES
SECTION-D: SOLAR SYSTEM WORKS

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I)	NS	SOLAR WATER HEATER				
1		Providing, fixing, installation, testing and commissioning of Solar Hot Water indirect Heating system using approved type of heating liquid medium comprising of flat plate solar panels, including all interconnecting insulated GI piping, primary and secondary recirculation pumps, pressure type insulated hot water tank, sacrificial magnesium anode with steel core including valves on inlet, outlet, Y stainer and a water meter on the inlet, air release valve all mounted on galvanized MS sections complete as required with connection with existing piping. (connect the system to hot water mixing tank via 50 mm dia pipe)				
a)		Ten Sets of Minimum 1 Nos. x 500 LPD flat plate solar collector panels of 2 x 1m size approx. the panels enclosed in insulated collected boxes with single piece toughened glass 4mm thick and fixed with heat resistant gasket. The system will deliver a minimum of 5,000 Kcal per day.	Each	16.00	100000.00	1600000.00
2.00		Integrated heat exchanger with drain down vessel and control panel designed so as to have insulated M.S. Horizontal tank (Capacity 100 litres of fluid). All the value & accessories shall be suitable for an operating pressure of 4.0 Kg./Sq.m PHE. The tank to hold atleast 100 litres of fluid and be suitable as a down vessel with provision for expansion tank and venting.	Set	4.00	150000.00	600000.00
3.00		Primary circulation pump two nos. (one working+ one standby) for circulation of fluid from Solar panels to heat exchanger.	Set	4.00	40000.00	160000.00
4.00		Secondary circulation pump two nos. (one working+ one standby) for circulation of fluid from heat exchanger to hot water mixing tanks.	Each	4.00	50000.00	200000.00
5.00		Inter-connected insulated GI piping insulated with 9mm thick nitrile rubber heat resistant insulation sections (Vidoflex or equivalent) and valves with outer mechanical protection of aluminium sheet cladding.	Lot	4.00	50000.00	200000.00
6.00		Supply, Installation, Testing & Commissioning of Electrical Panels : Switchboard cubical, fabricated from 16 gauge MS sheet with dust and vermin proof construction, powder coated in approved shade. All switchgear will be identified with etched plastic identification plates for each motor. The panel shall be wired with colour coded wiring. (All interconnecting wiring/cabling panels to motors, fuses, MCB, OFF/ON indicating lights, busbars, switchgears and accessories as required.)	LS	4.00	60000.00	240000.00
		Total C/f to Summary		Total NS Items [I]		3000000.00

BILL OF QUANTITIES
FIRE PROTECTION WORKS

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		SUB HEAD (I) :- ELECTRICAL				
		DSR ITEMS				
1.0		Supplying, fabricating and installing following size of perforated perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	20.00	405.00	8100.00
2.0	7.7	Laying and fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 kV grade of following size				
	7.7.1	Upto 35 sq. mm (clamped with 1 mm thick saddle)	RM	30.00	19.50	585.00
3.0		Providing and fixing ball valve (brass) of approved quality complete. (High or low pressure with plastic floats).				
	18.18.3	25 mm nominal bore	Each	4.00	421.65	1686.60
4.0		Providing and placing on terrace (at all floor levels) polyethylene water storage tank of approved brand and manufacture with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fitting and base support for tank. (@ 5.25/- per liter)				
	18.48	20000 litres capacity	Each	20000.00	6.10	122000.00
		Total C/f to Summary		Total DSR ITEMS [i]		132371.60
		NON Scheduled items				
1.0		Auto DOL starter for 3.0 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	1	15000.00	15000.00
2.0		Supplying and making end terminations with brass compression glands and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				
i		4 Core 4 sq. mm. Armoured Aluminium cable.	Nos.	2.00	450.00	900.00

3.0		Supply,testing and commissioning of 1100 Volt grade XLPE insulated and sheathed aluminium conductor Armoured cables including the cost of providing required gap between adjacent cables (minimum one cable dia.) and including the cost of providing identification tags etc. complete as per specification, as required.				
i		4 Core 2.5 sq. mm. Armoured Aluminium cable.	RM	20.00	85.00	1700.00
II		FIRE HYDRANT & SPRINKLER SYSTEM				
1.0		Providing, fixing, testing and commissioning of above ground M.S. C-Class Heavy Duty Pipes as per IS : 1239 (upto 150 mm dia.) and IS :3589 (upto 200 mm dia. And above) including cutting, screwing, welding etc. and providing all structural work fabricated from standard sections, (M.S. rounds, angles, channels etc.) and fittings like flanges, bends, tees, elbows, reducers, clamps, hangers, fasteners etc. including cutting, drilling, welding, cutting holes and chases in bricks /RCC walls/ slabs complete with painting of one coat of rich zinc primer and 2 or more coats of synthetic enamel paint of approved make / shade complete as per specification.				
i		150 mm dia.	RM	80	1750.00	140000.00
ii		80 mm dia.	RM	70	1050.00	73500.00
iii		25 mm dia.	RM	15	420.00	6300.00
2.0		Providing and Fixing M.S. pipe to I.S. 1239 (Medium duty) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets,reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. (for drain pipe) .The cost shall include the MS/GI structural supports as per <u>approved drawings and specifications</u> .				
a)		80 mm dia	Metre	80.00	735.00	58800.00
3.0		Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).	Each	26	5940.00	154440.00

4.0		Providing and fixing first aid fire hose reel drum wall mounting & swinging type fitted with 20 mm dia 36.5 m long high pressure hose to I.S. 5132 with 5 mm outlet SS nozzle with shut off valve (I.S. 884-1969). Name of Manufacturer should be embossed on the drum.	Each	22	7335.00	161370.00
5.0		Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification	Each	52	3837.00	199524.00
6.0		Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	26	1885.00	49010.00
7.0		Providing and fixing standard fireman's axe with heavy insulated rubber handle tested for 20000 watts.	Each	22	836.00	18392.00
8.0		Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.				
a)		Four way	Each	4.00	20260.00	81040.00
9.0		Providing, fixing, testing & commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate, 200 mm in diameter and 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968. (The cushion tank should be suitable for rated working pressure.	Each	4.00	12913.00	51652.00
10.0		Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)				
a)		25 mm dia full bore type	Each	22.00	769.00	16918.00

11.0		Providing and fixing fully glazed fire hose cabinet door 2000x800 mm depth fabricated with 20x20x3 mm and 40x20x3 mm hollow box sections mounted with 3 Nos 100 mm M.S. anodised butt hinges on M.S. angle frame of 45x45x5 mm size with hold fasts fixed to wall with PCC (1:2:4) blocks 100x100x100 mm including hasp and steeple for locking with pad lock arrangement, 4 mm thick clear float glass panel "FIRE HOSE" written on it with fire red, stove enamelled red paint to M.S. sections, black paint on inner side of lower glass panel complete as per approved detail.	Each	22.00	6638.00	146036.00
12.0		Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle at terrace)	Each	4.00	4049.00	16196.00
13.0		Providing and fixing cast iron butterfly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table "E" complete in all respects.				
a		80 mm dia with lever operated	Each	4.00	3904.00	15616.00
b		150 mm dia with lever operated	Each	22.00	7335.00	161370.00
14.0		Providing and fixing C.I. double flanged horizontal dual plate wafer type non return valves PN 1.6 including washer, nuts, bolts, 3 mm thick compressed asbestos gasket companion flanges as per table "E" complete.				
a		150 mm dia	Each	1.00	17459.00	17459.00
15.0		Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	4.00	613.00	2452.00
16.0		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	22.00	278.00	6116.00
17.0		Providing and fixing 'Y' strainer with CI body and S.S. strainer for outlet of OHT lines. (Terrace Level)				

a)		150 mm dia	Each	1.00	10124.00	10124.00
18.0		Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:				
a)		150 mm dia.	Each	4.00	6638.00	26552.00
III		HAND APPLIANCES (INTERNAL)				
		Note: All extinguishers shall carry ISI mark.				
1		Providing and fixing water based CO2 type extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve 30 cms long high pressure discharge hose, discharge nozzle, suspension bracket, ISI marked as per IS:934 finished externally with red enamel paint and fixed to wall with brackets complete with internal charges.				
a)		Capacity 9 lit.	Each	22	8000.00	176000.00
2		Providing and fixing CO2 extinguisher consisting of seamless MS cylindrical body squeeze lever discharge valve, internal discharge tube, 30 cms long high pressure discharge hose, discharge nozzle ISI marked as per IS 2878 including fixing with dash fasteners etc. complete.				
a)		Capacity 4.5 Kg	Each	22	5500.00	121000.00
3		Providing and fixing mechanical foam type (ISI marked) fire extinguishers consisting of welded M.S. cylindrical body squeeze lever discharge valve 30 cm long high pressure discharge hose, discharge nozzle, suspension bracket as per ISI marked finished externally with red enamel paint and fixed to wall with brackets complete with internal charger.				
a)		Capacity 9 lit.	Each	22	6500.00	143000.00
IV		SPRINKLER SYSTEM (INTERNAL)				
1.0		Providing and Fixing M.S. pipe to I.S. 1239 (Heavy class) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets, reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. Pipe upto 50 mm dia will be with threaded joints with holdtite and 65 mm dia and above will be with welded joint. The cost shall include the MS/GI structural supports as per approved drawings and specifications.				
a)		25 mm dia	Metre	830.00	420.00	348600.00
b)		32 mm dia	Metre	90.00	500.00	45000.00

c)		40 mm dia	Metre	60.00	600.00	36000.00
d)		50 mm dia	Metre	140.00	700.00	98000.00
e)		65 mm dia	Metre	200.00	850.00	170000.00
f)		80 mm dia	Metre	35.00	1050.00	36750.00
g)		100 mm dia	Metre	30.00	1500.00	45000.00
h)		150 mm dia	Metre	250.00	1750.00	437500.00
2.0		Providing and fixing 15 mm Chrome plated gunmetal sprinkler head with quartz bulb and set to operate at specified temperature pendent/upright/ side wall as per instruction.				
		Temperature of operation 68 deg..C K-80				
a)		Normal Responce Pendent type	Each	450.00	245.00	110250.00
b)		Normal Responce Upright type	Each	10.00	245.00	2450.00
c)		Normal Responce Side wall	Each	10.00	334.00	3340.00
d)		Nozzles of K value 40 and discharge 60 LPM	Each	36.00	500.00	18000.00
3.0		Providing & fixing inspecting testing assembly with drain valve arrangement as per approved drawing..				
a)		50 mm dia	Each	6.00	7251.00	43506.00
4.0		Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)				
a)		25 mm dia	Each	6.00	557.00	3342.00
5.0		Providing and fixing electrically operated flow indicating switches System Sensor or Potter brand in sprinkler branch line on each floor with necessary junction box installed in accessible place.				
c)		100 mm dia	Each	6	3235.00	19410.00
6.0		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	22	278.00	6116.00
7.0		Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	6	613.00	3678.00
8.0		Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete				
a)		50 mm dia with lever	Each	2	948.00	1896.00
b)		65 mm dia with lever	Each	2	1031.00	2062.00
c)		80 mm dia with lever	Each	6	1115.00	6690.00

d)		150 mm dia with lever	Each	6	1394.00	8364.00
9.0		Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:				
a)		150 mm dia.	Each	4.00	2231.00	8924.00
V		EXTERNAL FIRE HYDRANT				
1.0		Excavating trenches of required width for pipes, etc. including excavation for sockets and dressing of sides in hard/dense soil, ramming of bottom, depth upto 1.5 m including getting out the excavated soil and then returning the soil as required in layers not exceeding 200mm in depth including consolidating each deposited layer by ramming, watering, and disposal of surplus excavated soil as directed within a lead of 100 m.				
a)		Pipes, upto 300 mm dia	Cum	100.00	279.00	27900.00
2.0		Providing and fixing M.S pipes confirming to IS. 1239 heavy duty including all fittings like couplings, bends, elbows, offsets, blind flanges, plugs, tees, flanges (flanges as per table E), etc. threaded or welded (all type) joints as per detailed specifications as required, with a coat of red oxide primer and two or more coats of synthetic enamel paint of approved colour, cutting holes and chases in brick or RCC walls or floors and making good complete .				
a)		80 mm dia	Metre	10.00	1050.00	10500.00
b)		150 mm dia	Metre	200.00	1750.00	350000.00
3.0		Providing and applying one coat of 4 mm thick 'PYPKOTE' or COATEK anti rust pipe protection including approved primer as per manufacturers specifications and lap of 25 mm and fusing lam to make an impermeable layer on pipes in trenches or on structural/masonry members complete				
a)		80 mm dia	Metre	10.00	100.00	1000.00
b)		150 mm dia	Metre	200.00	128.00	25600.00
4.0		Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).	Each	4.00	5940.00	23760.00

5.0		Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	4.00	1885.00	7540.00
6.0		Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle)(Including cabinet M.S.structure support with primer & painting etc.)	Each	4.00	4049.00	16196.00
7.0		Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification.	Each	8.00	3837.00	30696.00
8.0		Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects.				
a)		80 mm dia with lever	Each	4.00	1115.00	4460.00
b)		150 mm dia with lever	Each	2.00	1394.00	2788.00
9.0		Providing and fixing anchor blocks of concrete 1:2:4 mix (1 cement : 2 coarse nominal size) for Fire pipe including necessary excavation, shuttering and centring, curing complete.(For irrigation line)	Cum	20.00	3841.00	76820.00
10.0		Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.				
a)		Four way	Each	1.00	20260.00	20260.00
VI FIRE PUMPS& ACCESSORIES						

		(All pumps should be supplied with wearing and mechaical seal. Performance curve should be approved before placing the order. All pumps should be supplied with base frame)				
1		Pump:				
		Providing,Fixing Supplying and fixing horizontal centrifugal pump with volute brozne impeller connctected to TEFC induction motor suitable for 400/410 Volts, 3 Phase, 50 Cycles , AC supply with the following specifications:				
a)		Capacity : 450 LPM				
b)		Head : 25 m				
c)		HP : 3 HP approx. or As required.				
d)		RPM : 2900				
e)		Mover : Electric Motor driven				
f)		Material of Construction:				
g)		Shaft & Sleeve : S.S- 410				
h)		Impeller : Bronze				
i)		Bearing : Grease lubricated				
j)		Seal - Mechanical seal.				
n)		Quantity :	Set	1	50000.00	50000.00
		Total C/f to Summary		Total NS Items [II]		3972865.00

BILL OF QUANTITIES						
SOLAR ENERGY						
Sr. No.	DSR 2012	Item Description	Unit	Qty	Unit Rate in Rs.	Amount in Rs.
A		Bill of Quantities				
1		Solar Panel 12V-125Wp	Nos.	88		
2		Module Mounting Structure	Nos.	88		
3		Battery Bank 120V-600Ah	Nos.	30		
4		Battery Protection Panel	Nos.	1		
5		PCU 120V DC ,Three Phase 18.5 KVA AC	Nos.	1		
6		D.C Distribution Board	Nos.	1		
7		AC Breaker Box with Auto Change Over and six numbers output	Nos.	1		
8		PV Aarray Junction Boxes	Lot	1		
9		Main Junction box	Nos.	1		
10		DC Cables set	Set	1		
11		Earthing	Set	1		
12		Lighting Arrestors	Set	1		
13		Accessories-Danger, Display boards etc	Lumpsum	1		
I		Rating 11 KW	Set	4	2250000.00	90,00,000.00
		GRAND TOTAL				90,00,000.00

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON-DSR Rates	Total of DSR and NON-DSR works
	MASTER ABSTRACT FOR GOLDEN JUBILEE BUILDING			
1	CIVIL WORKS FOR MAIN BUILDING	482,561,021.56	200,618,488.16	683,179,509.72
2	CIVIL WORKS FOR SITE	37,958,141.17	11,770,720.00	49,728,861.17
3	ELECTRICAL WORKS	23,667,453.00	45,911,723.00	69,579,176.00
4	PA & FA WORKS	882,600.00	5,679,708.24	6,562,308.24
5	PLUMBING AND SANITARY WORKS	3,877,799.60	2,940,724.39	6,818,523.99
6	FIRE FIGHTING WORKS	49,680.00	15,022,265.69	15,071,945.69
7	HVAC WORKS	3,877,165.50	119,841,978.54	123,719,144.04
	TOTAL	552,873,860.83	401,785,608.02	954,659,468.85

CIVIL WORKS BOQ FOR MAIN BUILDING

- 1 DIVIDER
- 2 SUMMARY OF CIVIL WORKS BOQ FOR MAIN BUILDING
- 3 CIVIL WORKS BOQ DSR ITEMS FOR MAIN BUILDING
- 4 CIVIL WORKS BOQ NON DSR ITEMS FOR MAIN BUILDING
- 5 SCHEDULE OF FINISHES

SI No	ITEMS	Amount as per DSR Rates [Rs]	Amount as per NON DSR Rates [Rs]	Total of DSR and NON DSR works [Rs]
	SUMMARY OF CIVIL WORKS FOR MAIN BUILDING			
1	CARRIAGE OF MATERIAL	1,626,544.22		1,626,544.22
2	EARTH WORK	5,006,725.64		5,006,725.64
3	CONCRETE WORK	6,976,164.75		6,976,164.75
4	REINFORCED CEMENT CONCRETE	338,120,139.00		338,120,139.00
5	MASONRY WORKS	7,546,027.30		7,546,027.30
6	STONE WORK	10,036,251.45		10,036,251.45
7	MARBLE & GRANITE WORK	3,660,729.30		3,660,729.30
8	WOOD & P.V.C. WORK	1,540,960.40		1,540,960.40
9	STEEL WORKS (MS)	13,202,199.00		13,202,199.00
10	FLOORING	31,432,336.70		31,432,336.70
11	ROOFING	19,858,353.90		19,858,353.90
12	FINISHING	32,930,458.75		32,930,458.75
13	DISMANTLING & DEMOLISHING	269,459.50		269,459.50
14	ALUMINIUM WORK	796,760.60		796,760.60
15	WATERPROOFING WORK	9,557,911.05		9,557,911.05
16	NON SCHEDULE ITEMS		200,618,488.16	200,618,488.16
	TOTAL OF CIVIL WORKS FOR MAIN BUILDING	482,561,021.56	200,618,488.16	683,179,509.72

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		CIVIL WORKS BOQ FOR MAIN BUILDING DSR ITEMS				
1	1	CARRIAGE OF MATERIAL				
	1.1	Carriage of materials by mechanical transport including loading, unloading and stacking.				
1.00	1.1.2	Earth Up to 1 Km	Cum	19,649.00	82.78	1,626,544.22
		TOTAL OF CARRIAGE OF MATERIAL				1,626,544.22
2	2	EARTH WORK				
2.01	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	100 Sqm	233.42	482.00	112,508.44
2.02	2.36	Deduct for disposed soil not leveled and neatly dressed.	Cum	19,649.00	25.35	-498,102.15
2.03	2.6	Earth work in Excavation by mechanical means (hydraulic excavation / manual means over areas exceeding 30 cm in depth, 1.5M in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 M and lift up to 1.5M, disposed earth to be leveled and neatly dressed.				
2.03.1	2.6.1	All kinds of soil	Cum	16,720.00	129.35	2,162,732.00
2.04	2.7	Earth work in Excavation by mechanical means (hydraulic excavation/ manual means over areas exceeding 30 cm in depth, 1.5M in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 M and lift up to 1.5M, disposed earth to be leveled and neatly dressed.				
2.04.1	2.7.1	Ordinary rock	Cum	50.00	197.75	9,887.50
2.04.2	2.7.3	Hard rock (blasting prohibited)	Cum	50.00	490.10	24,505.00
2.05	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m 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.				
2.05.1	2.8.1	All kinds of soil	Cum	11,721.00	130.80	1,533,106.80
2.06	2.9	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m 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 soils as directed, within a lead of 50 m.				
2.06.1	2.9.1	Ordinary rock	Cum	100.00	212.00	21,200.00
2.06.2	2.9.3	Hard rock (blasting prohibited)	Cum	100.00	491.95	49,195.00
2.07	2.24	Extra rates for quantities of works executed:				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.07.1	2.24.1	In or under water and / or liquid mud, including pumping out water as required	metre	5,132.00	26.16	134,253.12
2.07.2	2.24.2	In or under foul position, including pumping out water as required	metre	500.00	32.70	16,350.00
2.08	2.25	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 50m and lift up to 1.50m	Cum	5,132.00	83.80	430,061.60
2.09	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials				
2.09.1	2.26.1	a) All kinds of soil	Cum	11,889.00	34.60	411,359.40
2.09.2	2.26.1	b) Extra for 3.0m to 4.5m (2 lifts)				
		34.60x2 = 69.20	Cum	7,423.00	69.20	513,671.60
2.09.3	2.26.2	Ordinary or hard rock	Cum	100.00	62.00	6,200.00
2.10	2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site including carriage, loading, unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	Cum	100.00	110.75	11,075.00
2.10.1	2.38	Filling with available fly ash and earth (excluding rock) in trenches or embankment in layers (each layer should not exceed 15 cm), with intermediate layer of compacted earth (Soil density of 98%) after every four layers of compacted depth of fly ash, sides & top layer of filling shall be done with earth having total minimum compacted thickness 30 cm or as decided by Engineer - in-charge, including compacting each layer by rolling/ ramming and watering, all complete as per drawing and direction of Engineer -in – charge.	Cum	100.00	83.80	8,380.00
2.11	2.28	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.				
2.11.1	2.28.1	All kinds of soil	100 Sqm	64.52	935.25	60,342.33
		TOTAL OF EARTH WORK				5,006,725.64
3	4	CONCRETE WORK				
3.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All Work up to plinth level				
3.01.1	4.1.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	10.00	4,514.05	45,140.50
3.01.2	4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cum	1,659.00	3,593.30	5,961,284.70
3.01.3	4.1.10	1:5:10 (1 Cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	Cum	150.00	3,357.40	503,610.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
3.02	4.6	Providing and fixing at or near ground level precast cement concrete in Kerbs / Edging etc as per approved pattern and setting in position with cement mortar 1 : 3 (1 Cement : 3 coarse sand) including the cost of required centering, shuttering complete.				
3.02.1	4.6.1	1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	Cum	11.00	4,712.80	51,840.80
3.03	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	per 50 kg	2,000.00	35.25	70,500.00
3.03(a)	4.14	Extra for concrete work in superstructure above floor V level for each four floors or part there of				
		Height from 6th floor to 9th floor	Cum	20.00	539.35	10,787.00
		Height from 10th floor to 13th floor	Cum	20.00	1,078.70	21,574.00
		Height from 14th floor to 17th Floor	Cum	20.00	1,618.05	32,361.00
3.04	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm bed by dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	Sqm	305.00	338.75	103,318.75
3.04(a)	4.18	Extra for addition of synthetic Polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete / RCC / Flooring / water retaining structures by using 125gms of synthetic Polyester triangular fibre for used 50 Kg of as per directions of Engineer-in-Charge.	Per Bag of 50 Kg cement	3,316.00	53.00	175,748.00
TOTAL OF CONCRETE WORK						6,976,164.75

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
4	5	REINFORCED CEMENT CONCRETE				
	5.1	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 :				
	5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	Cum	10.00	5,094.85	50,948.50
		Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level , excluding cost of centering, shuttering, finishing and reinforcement				
		1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	Cum	10.00	5,735.75	57,357.50
4.01	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:				
4.01.1	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sqm	2,972.00	166.90	496,026.80
4.01.2	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	20,228.00	285.15	5,768,014.20
4.01.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sqm	31,769.00	311.20	9,886,512.80
4.01.4	5.9.4	Shelves (Cast in-situ)	Sqm	100.00	311.20	31,120.00
4.01.5	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sqm	21,855.00	262.25	5,731,473.75
4.01.6	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	12,332.00	365.60	4,508,579.20
4.01.7	5.9.7	Stairs, (excluding landings) except spiral-staircases.	Sqm	3,005.00	326.30	980,531.50
4.01.8	5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	Sqm	100.00	166.90	16,690.00
4.01.9	5.9.16	Edges of slabs and breaks in floors and walls				
4.01.9.1	5.9.16.1	Under 20 cm wide	metre	100.00	99.45	9,945.00
4.01.9.2	5.9.16.2	Above 20 cm wide	Sqm	100.00	441.10	44,110.00
4.01.9.10 (a)	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.	sqm	100.00	470.10	47,010.00
4.01.10	5.9.17	Cornices and mouldings	Sqm	100.00	495.50	49,550.00
4.01.11	5.9.19	Weather shade, Chajjas, corbels etc., including edges	Sqm	100.00	411.10	41,110.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
4.02	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and de-centering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).				
4.02.1	5.11.1	Suspended floors, roofs, landing beams and balconies.(Plan area to be measured)	Sqm	30,822.00	121.65	3,749,496.30
4.03	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
4.03.1	5.22.6	Thermo-Mechanically Treated bars.	kilogram	413,675.00	62.25	25,751,268.75
4.03.2	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete above plinth level.				
	5.22.6	Thermo-Mechanically Treated bars	kilogram	2,551,535.00	62.25	158,833,053.75
	5.29	Providing and fixing sheet covering over expansion joints with iron screws as per design				
	5.29.2	Aluminium fluted strips 3.15 mm thick.				
	5.29.2.2	200 mm wide	metre	400.00	437.30	174,920.00
4.04	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, 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				
		(Note :- Cement content considered in this item is @ 330 Kg/Cum. Excess/less cement used as per design mix is Payable / recoverable separately).				
4.04.1	5.33.1	All works upto plinth level	Cum	100.00	5,242.15	524,215.00
		Footing and rafts, column upto plinth level, plinth beams, shear walls				
4.04.2	5.33.2	All works above plinth level upto floor V level	Cum	100.00	5,781.50	578,150.00
4.05	5.34	Extra for providing richer mixes at all floor levels				
4.05.1	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note : Cement content considered in M-30 is @ 340 kg/cum)	Cum	819.00	63.20	51,760.80
4.05.2	5.34.2	Providing M-35 grade concrete instead of M-25 grade BMC/RMC. (Note : Cement content considered in M-35 is @ 350 kg/cum)	Cum	1,235.00	126.45	156,165.75
4.05.3	5.34.3	Providing M-40 grade concrete instead of M-25 grade BMC/RMC.(Note : Cement content considered in M-40 is @ 360 kg/cum)	Cum	1,804.00	186.90	337,167.60

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quintal	10.00	589.80	5,898.00
4.06	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of 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 the Engineer-in-charge.				
		(Note :- Cement content considered in this item is @ 330 Kg/Cum. Excess/less cement used as per design mix is Payable / recoverable separately).				
4.06.1	5.37.1	All works up to plinth level	Cum	4,683.00	5,590.60	26,180,779.80
4.06.2	5.37.2	All works above plinth up to floor V level.	Cum	15,098.00	6,130.00	92,550,740.00
4.07	5.38	Extra for R.C.C./ B.M.C/ R.M.C. work above floor V level for each four floors or part thereof	Cum	2,661.00	151.00	401,811.00
4.07.1	i	6th floor to 9th floor				
4.07.2	ii	Extra for R.C.C. work above 9th floor level for each FOUR floor or part thereof. (10th floor to 13th floor) 2lifts 151 x 2 = 302.00 per cum	Cum	851.00	302.00	257,002.00
4.07.3	iii	Extra for R.C.C. work above 13th floor level for each FOUR floor or part thereof. (13th floor to 16th floor) 3lifts 151 x 3 = 453.00 per cum	Cum	292.00	453.00	132,276.00
	5.4	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of 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 the Engineer-in-charge.				
		NOTE- (1) Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		(2) Fly ash conforming to grade I of IS 3812 (Part-1) only be used as part replacement of OPC as per IS : 456. Uniform blending with cement to be ensured in accordance with clauses 5.2 and 5.2.1 of IS:456 -2000 in the items of BMC and RMC.				
	5.40.1	All works up to Plinth level	Cum	50.00	5,519.40	275,970.00
	5.40.2	All works above plinth & up to floor V level.	Cum	50.00	6,059.20	302,960.00
4.08	5.43	Providing and fixing in position Stainless steel Grade 304 plate-1.0 mm thick as per design for expansion joints.				
4.08.1	5.43.1	200 mm wide.	Kg	100.00	559.85	55,985.00
4.08.2	5.43.2	300 mm wide.	Kg	100.00	815.40	81,540.00
		TOTAL OF REINFORCED CEMENT CONCRETE				338,120,139.00
5	6	MASONRY WORKS				
5.01	6.1	Brick work with Common burnt clay FPS (Non Modular) Brick of class designation 7.5 in foundation and plinth in .				
5.01.1	6.1.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	100.00	3,316.55	331,655.00
5.02	6.4	Brick work with Common burnt clay FPS (non modular) Brick of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and size in:				
5.02.1	6.4.2	Cement mortar 1:6 (1 cement: 6 coarse sand) .	Cum	1,683.00	3,876.15	6,523,560.45
5.03	6.5	Extra for brick work / AAC block masonry / Tile brick masonry in superstructure above floor V level for each four floors or part thereof by mechanical means .				
5.03.1		i)From 6th floor to 9th floor	Cum	1,253.00	250.45	313,813.85
5.03.2		ii)From 10th floor to 12th floor (2 lifts- 2x250.45 = 500.90)	Cum	306.00	500.90	153,275.40
	6.13	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	100.00	476.85	47,685.00
5.04	6.14	Extra for half brick work masonry in superstructure, above floor V level for each four floors or part thereof by mechanical means.				
5.04.1		i)From 6th floor to 9th floor	Sqm	265.00	22.20	5,883.00
5.04.2		ii)From 10th floor to 12th floor (2 lifts- 2x22.20 = 44.40)	Sqm	117.00	44.40	5,194.80
5.05	6.15	Extra for providing and placing in position 2 nos of 6 mm dia MS bars at every third course of half brick masonry.	Sqm	2,606.00	63.30	164,959.80
		TOTAL OF MASONRY WORK				7,546,027.30
6	7	STONE WORK				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
6.01	7.40	Providing and fixing dry cladding upto 10 metre heights with 30 mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and / or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately).				
	7.40.2	White sand stone	Sqm	1,731.00	2,048.35	3,545,693.85
6.02	7.41	Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone) on walls at all heights using M.S. Square / rectangular tube in the required pattern as per architectural drawing, including cost of cutting, bending, welding etc. The frame work shall be fixed to the wall with the help of M.S. Brackets / lugs of angle iron / flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete block 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 300x230x300 mm, including cost of necessary centering and shuttering and with approved expansion hold fasteners on CC/RCC surface, including drilling necessary holes.				
		Approved cramps / pins etc. shall be welded to the frame work to support stone cladding, the steel work will be given a priming coat of Zinc primer as approved by Engineering - charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid for separately and nothing extra shall be paid).	kg	34,620.00	119.00	4,119,780.00
	7.42	Providing and fixing adjustable stainless steel cramps of approved quality, required shape and size, adjustable with stainless steel nuts, bolts and washer (total weight not less than 260 gms), for dry stone cladding fixed on frame work at suitable location, including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	Each	13,848.00	171.20	2,370,777.60
		TOTAL OF STONE WORK				10,036,251.45

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
7	8	MARBLE & GRANITE WORK				
7.01	8.1	Marble work gang saw cut (polished and machine cut) of thickness 18 mm for wall lining (veneer work) backing filled with a grout of average 12 mm thick cement mortar 1:3 (1 Cement: 3 Coarse sand), including pointing with white cement mortar 1:2 (1 white cement, 2 marble dust) with an admixture of pigment to match the marble / granite shade. (To be secured to the backing by means of cramps, which shall be paid for separately).				
7.01.1	8.1.1	Granite/Raj nagar plain white marble/ Udaipur green marble/ zebra black marble.				
7.01.1.1	8.1.1.1	Area of slab upto 0.50 sqm	Sqm	66.00	2,222.90	146,711.40
7.01.1.2	8.1.1.2	Area of slab over 0.50 sqm	Sqm	400.00	2,314.10	925,640.00
7.02	8.2	Providing and fixing 18mm thick gang saw cut, mirror polished, pre-moulded and pre-polished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and textured laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joint treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc., complete at all levels.				
7.02.1	8.2.2	Granite of any colour and shade.				
7.02.1.1	8.2.2.1	Area of slab up to 0.50 sqm.	Sqm	480.00	3,041.15	1,459,752.00
7.02.1.2	8.2.2.2	Area of slab over 0.50 Sqm	Sqm	57.00	3,083.40	175,753.80
7.03	8.3	Providing edge mouldings to 18 mm thick marble stone counters, vanities etc. including machine polishing to edge to give high gloss finish etc. complete as design approved by engineer in charge.				
7.03.1	8.3.2	Granite work	Rmt	4,454.00	178.75	796,152.50
7.04	8.5	Extra for providing opening of required size & shape for wash basins/kitchen sink in kitchen platform , vanity counters and similar location in marble/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	Each	65.00	281.10	18,271.50
	8.6	Mirror polishing on marble work / Granite work / stone work where ever required to give high gloss finish complete.	Sqm	100.00	163.10	16,310.00
7.05	8.7	Providing and fixing cramps of required size & shape in RCC / CC / Brick masonry backing with cement mortar 1:2 (1 cement :2 coarse sand), including drilling necessary hole in stones and embedding the cramp in the hole (fastener to be paid separately).				
7.05.1	8.7.2	Stainless steel cramps	kg	132.00	524.10	69,181.20

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
7.06	8.10	Providing and fixing stone slab with 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.				
7.06.1	8.10.2	Granite stone of approved shade.	Sqm	18.00	2,942.05	52,956.90
		TOTAL OF MARBLE & GRANITE				3,660,729.30
8	9	WOOD & P.V.C. WORK				
8.01	9.21	Providing and fixing ISI marked flush door shutters conforming to IS 2202 (part 1) Non decorative type , core of block board construction with frame of 1st class hard wood and well matched commercial teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
8.01.1	9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	Sqm	110.00	1,578.30	173,613.00
	9.21.3	25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws.	Sqm	50.00	1,266.75	63,337.50
8.02	9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured)	Sqm	110.00	325.20	35,772.00
8.03	9.24	Extra for providing vision panel not exceeding 0.10 sqm in all type of flush doors (Cost of glass excluded) (over all area of door shutter to be measured)				
8.03.1	9.24.1	Rectangular or square	Sqm	10.00	127.75	1,277.50
	9.25	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).				
	9.25.1	Decorative type door	Sqm	80.00	336.25	26,900.00
	9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	Sqm	80.00	92.90	7,432.00
	9.42	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 3087 marked, including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade, nickel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets, including fixing with 25x3 mm M.S. flat 10 cm long fixed to pelmet with hollock wood cleats of size 100 mm x 40 mm x 40 mm on both inner side of pelmet and rawl plugs 75 mm long etc. all complete.	metre	50.00	298.45	14,922.50

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
8.04	9.48	Providing and fixing M.S.grills of required pattern in frames of windows etc. with M.S.flats square or round bars etc. including priming coat with approved steel primer all complete.				
8.04.1	9.48.2	Fixed to openings/wooden frames with rawl plugs screws etc.				
		For Sky light	Kg	5,535.00	98.20	543,537.00
8.05	9.71	Providing and fixing IS: 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc.,complete:				
8.05.1	9.71.1	125x64x2.5mm	Each	282.00	66.95	18,879.90
	9.81	Providing and fixing bright finished brass handles with screws etc. complete				
	9.81.1	125 mm	Each	10.00	169.60	1,696.00
	9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete	Each	10.00	73.40	734.00
	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	Each	4.00	981.75	3,927.00
	9.88	Providing and fixing chromium plated brass 100mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete	Each	10.00	646.50	6,465.00
	9.90	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete				
	9.90.1	Size 40 mm	Each	10.00	137.75	1,377.50
	9.91	Providing and fixing chromium plated brass 50mm cupboard or wardrobe knobs with nuts complete.	Each	10.00	57.65	576.50
	9.92	Providing and fixing chromium plated brass handles with necessary screws etc. complete:				
	9.92.1	125 mm	Each	10.00	192.80	1,928.00
8.06	9.97	Providing and fixing aluminum tower bolts ISI marked anodized (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:				
8.06.1	9.97.4	150x10 mm	Each	94.00	59.00	5,546.00
8.07	9.101	Providing and fixing aluminum hanging floor door stopper ISI marked anodized (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.				
8.07.1	9.101.1	Single rubber stopper	Each	94.00	28.60	2,688.40

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
	9.117	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ± 1 mm), with wall thickness 2.0 mm (± 0.2 mm), 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 19 mm and 1mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineering-charge.				
	9.117.2	Extruded section profile size 42x50 mm	metre	76.00	177.05	13,455.80
	9.118	Providing and fixing to existing door frames				
	9.118.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm (± 0.2 mm), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanized/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanized M.S. tube of size 25x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm (± 0.2 mm) wall thickness fixed to the shutter styles by means of plastic / galvanized 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 galvanized M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	Sqm	57.00	2,587.25	147,473.25
8.08	9.121	Providing and fixing Fiber Glass Reinforced plastic (FRP) door frame of cross section 90x45mm having single rebate of 32x15mm to receive shutter of 30mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. MS stay shall be provided at bottom to steady the frame.	Rmt	300.00	445.25	133,575.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
8.09	9.122.1	Providing and fixing 30 mm thick glass fiber reinforced plastic (FRP) paneled door shutter of required colour and approved brand and manufacture, made with fire retardant grade unsaturated polyester resin , moulded to 3mm thick FRP laminate for forming hollow rails and styles , with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames.	Sqm	157.00	2,139.15	335,846.55
TOTAL OF WOOD & P.V.C. WORK						1,540,960.40
9	10	STEEL WORKS (MS)				
9.01	10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S.laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS:4454 - part 1 and M.S.top cover of required thickness for rolling shutters.				
9.01.1	10.6.1	80x1.25 mm M.S.laths with 1.25mm thick top cover	Sqm	22.00	1,840.85	40,498.70
9.02	10.7	Providing and fixing ball bearings for rolling shutters.	Each	6.00	429.85	2,579.10
9.03	10.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.				
9.03.1	10.8.2	Exceeding 16.8 sqm in area	Sqm	22.00	662.20	14,568.40
9.04	10.14	Providing and fixing pressed steel door frames confirming to IS 4351 manufactured from commercial mild steel sheet of 1.60 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.60mm pressed mild steel welded or rigidly fixed together by mechanical means, including MS pressed butt hinges 2.5mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge :				
9.04.1	10.14.2.1	Profile C: fixing with adjustable lugs with split end tile to each jamb.	Rmt	60.00	370.00	22,200.00
9.04.2	10.14.2.2	Profile C : Fixing with carbon steel galvanized dash fastener of required dia and size(to be paid for separately)	Rmt	10.00	363.10	3,631.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
9.05	10.15	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular / L- Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.				
9.05.1	10.15.2	Fixing with carbon steel galvanized dash fastener of required dia and size(to be paid for separately)	Kgs	50.00	114.30	5,715.00
9.06	10.25	Steel work welded in built up sections / framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
9.06.1	10.25.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	Kg	180,200.00	67.20	12,109,440.00
9.06.2	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	kg	11,092.00	77.90	864,066.80
9.06.3	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	kg	250.00	558.00	139,500.00
TOTAL OF STEEL WORK						13,202,199.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
10	11	FLOORING				
10.01	11.4	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 grade stone aggregate 6 mm nominal size) by volume hardening compound mixed @ 2 liter per 50kg of cement or as per manufacturer specifications This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete	Sqm	2,134.00	420.50	897,347.00
10.02	11.5	62mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm th 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 liters per 50 kg of cement or as per manufacturer's specifications . This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	Sqm	1,885.00	464.80	876,148.00
10.03	11.6	Cement plaster skirting (up to 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.				
10.03.1	11.6.1	18mm thick	Sqm	139.00	258.20	35,889.80
10.04	11.13	Providing and fixing glass strips in joints of Terrazo/Cement concrete floor.				
10.04.1	11.13.1	40 mm wide and 4 mm thick	Rmt	5,988.00	29.40	176,047.20
10.05	11.24	Extra for pre-finished nosing to treads of steps of marble stone.	Rmt	1,382.00	197.75	273,290.50
10.06	11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 Rmt.	Sqm	841.00	230.55	193,892.55
10.07	11.26	Kota stone slab flooring over 20mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of Cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
10.07.1	11.26.1	25 mm thick	Sqm	1,583.00	945.70	1,497,043.10
10.08	11.27	Kota stone slab 20mm thick in risers of steps, skirting, dado and pillars laid on 12mm (Average) with cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry with pigment to match the shade of the slab, including rubbing and polishing complete.	Sqm	1,061.00	954.10	1,012,300.10
10.09	11.29	40mm thick fine dressed stone flooring over 20 mm (Average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand), including pointing with cement mortar 1:2 (1 cement : 2 Stone dust) with an admixture of pigment to match the shade of stone.				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
10.09.1	11.29.2	White sand stone	Sqm	171.00	557.50	95,332.50
10.10	11.31	Extra for pre-finished nosing in treads of steps of kotah stone / sand stone slab.	Rmt	2,978.00	52.45	156,196.10
10.11	11.32	Extra for kota stone / sand stone in treads of steps and risers using single length up to 1.05 Rmt.	Rmt	858.00	12.10	10,381.80
10.12	11.36	Providing and laying 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by manufacturer) of approved make in all colors, 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 @ 3.3 kg/ sqm including pointing in white cement mixed with pigments of matching shade complete.	Sqm	2,455.00	724.25	1,778,033.75
10.13	11.39	Providing and laying rectified glazed ceramic floor tiles 300x300 mm or more (thickness to be specified by manufacturer) of 1st quality conforming to IS: 15622 of approved make, in colors white, Ivory, grey, fume Red brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigments etc., complete.	Sqm	882.00	931.50	821,583.00
10.14	11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08% and confirming to IS : 15622, of approved make, in all colours and shades, laid on 20mm thick bed of Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigments etc., complete.				
10.14.1	11.41.2	Size of Tile 60x60 cm	Sqm	14,880.00	1,337.10	19,896,048.00
10.14.2	11.41.4	Size of Tile 100x100 cm	Sqm	1,653.00	2,246.10	3,712,803.30
		TOTAL OF FLOORING				31,432,336.70
11	12	ROOFING				
11.01	12.34	Providing and fixing Thermal insulation of ceiling (Under deck insulation) with resin bonded fibre glass wool conforming to IS : 8183, density 24Kg/Cum, 50mm thick, wrapped in 200 G virgin polythene bags fixed to ceiling with metallic cleats (50x50x3mm) @ 60cm and wire mesh of 12.5x24 gauge wire mesh, for top most ceiling of building.	Sqm	5,650.00	431.70	2,439,105.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
11.02	12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections,power pressed from M.S.sheets and galvanized with Zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9mm running at the spacing of 1200mm centre to centre, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having lips of 10.5mm, at 450mm centre to centre, shall be fixed in a direction perpendicular to G.I.intermediate channel with connecting clips made out of 2.64mm dia x 230mm long G.I.wire at every junction.				
		Including fixing perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm center, with 25mm long dry wall screws @ 230mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5x25mm at 230 c/c, including jointing and finishing to aflush finish of tapered and square edges of the board with recommended jointing compound,jointing tapes,finishing with jointing compound in 3 layers covering upto 150mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings,grills,diffusers,cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in charge but excluding the cost of painting with:				
11.02.1	12.45.3	12.5 mm thick tapered edge gypsum moisture resistant board.	Sqm	5,942.00	826.80	4,912,845.60

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		Providing and fixing 15mm thick densified regular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture spintone/cosmos/Hexa or equivalent of size 595x595mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm including both sides) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33mm thick (minimum) sheet, spaced 1200mm centre to centre, and cross "T" of size 24x28mm made out of 0.33mm(Minimum) sheet, 1200mm long spaced between main 'T' at 600mm centre to centre to form a grid of 1200x600mm and secondary cross 'T' of length 600mm and size 24x28mm made of 0.33mm thick(Minimum) sheet,				
		to be interlocked at middle of the 1200x600mm panel to form grid of size 600x600mm, resting on periphery walls/partitions on a perimeter wall angle pre-coated steel of size(24x24x3000) mm made of 0.40mm thick (minimum) sheet with the help of rawl plugs at 450mm centre to centre with 25mm long dry wall screws @ 230mm interval and laying 15mm thick densified edges calcium silicate ceiling tiles of approved texture (Spintone/Cosmos/hexa) in the grid, including, cutting/making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I.slotted cleats of size 25x35x1.6mm fixed to ceiling with 12.5mm dia and 50mm long dash fasteners.				
		4mm G.I.adjustable rods with galvanized steel level clips of size 85x30x0.8 mm, spaced at 1200mm centre to centre along main 'T', bottom exposed with 24mm of all T-sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge.				
11.03	12.53	Note: Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut-outs) having area less than 0.30 sqm. The calcium silicate ceiling tile shall have NRC value of 0.50(Minimum), light reflection > 85%, non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity< 0.043 w/m O KC.	Sqm	6,000.00	1,566.00	9,396,000.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
11.04	12.55	Providing and fixing Heat Resistant Terrace Tiles (300mmX300mmX20mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20mm thick cement sand mortar in the ratio of 1:4(1 cement : 4 coarse sand) and grouting the joints with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150mm height along the parapet walls in the same manner.	Sqm	3,009.00	1,033.70	3,110,403.30
		TOTAL OF ROOFING				19,858,353.90
12	13	FINISHING				
12.01	13.1	12 mm cement plaster of mix :				
12.01.1	13.1.1	1:4 (1 cement : 4 fine sand)	Sqm	33,246.00	123.50	4,105,881.00
12.01.2	13.1.2	1:6 (1 cement : 4 fine sand)	Sqm	500.00	112.50	56,250.00
12.02	13.5	15 mm thick cement plaster on rough side of single or half brick wall of mix:				
12.02.1	13.5.1	1:4 (1 cement: 4 fine sand)	Sqm	45,132.00	153.60	6,932,275.20
12.02.2	13.5.2	1:6 (1 cement: 4 fine sand)	Sqm	500.00	140.45	70,225.00
12.03	13.12	18 mm cement plaster in 2 coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer of 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge.	Sqm	32,973.00	198.25	6,536,897.25
12.04	13.21	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturer.	per bag of 50 kg cement used in the mix	811.00	37.40	30,331.40
12.05	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.	Sqm			
	13.22	10 to 13m 1 lifts	Sqm	1,699.00	28.85	49,016.15
	13.22	13 to 16m 2 lifts	Sqm	1,801.00	57.70	103,917.70
	13.22	16 to 19 m 3 lifts	Sqm	2,039.00	86.55	176,475.45
	13.22	19 to 22 m 4 lifts	Sqm	1,790.00	115.40	206,566.00
	13.22	22 to 25 m 5 lifts	Sqm	1,624.00	144.25	234,262.00
	13.22	25 to 28 m 6 lifts	Sqm	2,153.00	173.10	372,684.30
	13.22	28 to 31 m 7 lifts	Sqm	1,941.00	201.95	391,984.95
	13.22	31 to 34 m 8 lifts	Sqm	1,675.00	230.80	386,590.00
	13.22	34 to 37 m 9 lifts	Sqm	1,709.00	259.65	443,741.85
	13.22	37 to 40 m 10 lifts	Sqm	2,296.00	288.50	662,396.00
	13.22	40 to 43 m 11 lifts	Sqm	2,003.00	317.35	635,652.05
	13.22	43 to 46 m 12 lifts	Sqm	732.00	346.20	253,418.40
	13.22	46 to 49 m 13 lifts	Sqm	435.00	375.05	163,146.75

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
	13.22	49 to 52 m 14 lifts	Sqm	408.00	403.90	164,791.20
	13.22	52 to 55 m 15 lifts	Sqm	414.00	432.75	179,158.50
	13.22	55 to 58 m 16 lifts	Sqm	413.00	461.60	190,640.80
	13.22	58 to 61 m 17 lifts	Sqm	469.00	490.45	230,021.05
	13.22	61 to 64 m 18 lifts	Sqm	453.00	519.30	235,242.90
	13.22	64 to 67 m 19 lifts	Sqm	360.00	548.15	197,334.00
	13.22	67 to 70 m 20 lifts	Sqm	545.00	577.00	314,465.00
	13.22	70 to 71.50 m 21 lifts	Sqm	283.00	605.85	171,455.55
	13.26	Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	3,903.00	83.80	327,071.40
	13.37	White washing with lime to give an even shade				
	13.37.1	New work (three or more coats)	Sqm	100.00	11.75	1,175.00
	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 priming coat of exterior primer applied @ 2.20kg/10 sqm	Sqm	3,081.00	117.70	362,633.70
	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 priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	Sqm	1,000.00	67.50	67,500.00
12.06	13.52	Finishing with epoxy paint (two or more coats) at all locations prepared and and applied as per manufacturers specifications including appropriate priming coat , preparation of surface , etc. complete.				
12.06.1	13.52.2	On concrete work	Sqm	50.00	108.55	5,427.50
	13.68	French spirit polishing :				
	13.68.1	Two or more coats on new works including a coat of wood filler	Sqm	25.00	137.45	3,436.25
12.07	13.78	Providing and applying 12mm 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 locations, finished in smooth line and level etc. complete.	Sqm	100.00	214.40	21,440.00
12.08	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer over plastered surface to prepare the surface even and smooth complete.	Sqm	40,000.00	76.05	3,042,000.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
12.09	13.82	Wall painting with acrylic emulsion paint , having VOC (Volatile Organic Compound) content less than 50 grams / litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
12.09.1	13.82.2	Two coats	Sqm	33,746.00	56.60	1,910,023.60
12.10	13.83	Wall painting with premium acrylic emulsion paint , of interior grade, having VOC (Volatile Organic Compound) content less than 50grams/litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
12.10.1	13.83.2	Two coats	Sqm	45,632.00	61.45	2,804,086.40
12.11	13.85	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile organic Compound) content.				
12.11.1	13.85.1	With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/litre.	Sqm	291.00	27.40	7,973.40
12.11.2	13.85.2	With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 50 grams/litre.	Sqm	1,663.00	24.30	40,410.90
12.11.3	13.85.3	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre.	Sqm	32,973.00	25.55	842,460.15
		TOTAL OF FINISHING				32,930,458.75

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
13	15	DISMANTLING & DEMOLISHING				
13.01	15.2	Dismantling cement concrete manually / by mechanical means and disposal of material within 50 metres lead as per direction of engineer in-charge.				
13.01.1	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	Cum	20.00	671.05	13,421.00
13.02	15.3	Demolishing RCC work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material with in 50 m lead as per direction of engineer in-charge.	Cum	20.00	978.95	19,579.00
13.03	15.7	Demolishing Brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable materials within 50 m lead as per direction of engineer in-charge.				
13.03.1	15.7.4	In Cement mortar	Cum	20.00	566.60	11,332.00
	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.	Cum	50.00	4,502.55	225,127.50
		TOTAL DISMANTLING & DEMOLISHING				269,459.50
14.00	21.00	ALUMINIUM WORK				
		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, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. 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, paneling and dash fasteners to be paid for separately)				
14.1	21.1.1	For fixed portion				
14.1.1	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron.	Kg	700.00	387.60	271,320.00
14.1.2	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)				
14.1.3	21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	900.00	436.35	392,715.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
14.2	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):				
14.2.1	21.3.2	With float glass panes of 5.50 mm thickness	Sqm	80.00	905.75	72,460.00
14.3	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.				
14.3.1	21.8.1	Upto 5mm depth and 5 mm width	metre	300.00	75.10	22,530.00
14.4	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.				
14.4.1	21.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar	Each	4.00	544.40	2,177.60
14.5	21.18	Providing and fixing 12mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc. to be paid separately)	SQm	8.00	4,444.75	35,558.00
TOTAL OF ALUMINIUM WORKS						796,760.60

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
15	22	WATERPROOFING WORK				
		Sunken area water proofing				
	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) Ist course of applying cement slurry @ 4.4kg/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 20 mm 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 100mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	Sqm	4,368.00	399.60	1,745,452.80
15.01	22.4	Providing and placing in position suitable PVC water stopper 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.				
15.01.1	22.4.2	Dumb bell with central bulb (180 mm wide, 8 mm thick.	metre	577.00	413.85	238,791.45
		Terrace water proofing				
15.03	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 300 mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm 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,				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		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. 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 3 mm 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.				
15.03.1	22.7.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	Sqm	6,636.00	786.70	5,220,541.20
15.04	22.16	Providing and laying in situ 5 course water proofing treatment with APP (Atactic polypropylene) modified polymeric mebrane over roof consisting of first coat of bitumen primer 0.4 kg/sqm, 2nd and 4th courses of bonding material @1.2 kg/sqm, which shall consist of blown type bitumen grade 85/25 conforming to IS 702, 3rd layer of roofing membrane APP modified polymeric membrane 2.0 mm thick of 3.0 kg/sqm weight consisting of five layers of prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sided with Polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. The top most layer shall be finished with water proofing as per slno 5.02, which is paid separately.	Sqm	6,636.00	300.75	1,995,777.00
15.05	22.21	Extra for covering top of membrane with geo textile , 120 Gsm, non woven , 100% polyster of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by butane torch as per manufacturers recommendation.	Sqm	6,636.00	53.85	357,348.60
		TOTAL OF WATER PROOFING WORKS				9,557,911.05
		TOTAL OF CIVIL WORKS BOQ FOR MAIN BUILDING DSR ITEMS				482,561,021.56

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		CIVIL WORKS BOQ FOR MAIN BUILDING NON DSR ITEMS				
16.0		NON SCHEDULE ITEMS				
		EARTH WORK				
1	NS 1	Diluting and injecting chemical emulsion for PRE-CONSTRUCTIONAL Anti-termite treatment and creating continuous chemical barrier, wall trenches, top surface of plinth filling, along the external perimeter of building, over the top surface of consolidated earth of which apron is to be laid,surroundings of pipes and conduits etc. complete as per specification.b(Plinth area of the building at ground floor only shall be measured for payment). Chlorpyriphos Emulsifiable concentrate of 20% with 1% Concentration.	SQM	6,991.44	310.39	2,170,073.06
2	NS 2	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	100.00	300.00	30,000.00
		TOTAL OF EARTH WORK				2,200,073.06
		CONCRETE WORK				
3	NS 3	Providing Core cutting in concrete slabs / wall etc of the following diameter including finishing etc complete.				
a	a	100 mm dia	Each	20.00	950.00	19,000.00
b	b	150 mm dia	Each	20.00	1,250.00	25,000.00
c	c	200 mm dia	Each	20.00	1,500.00	30,000.00
		TOTAL OF CONCRETE WORK				74,000.00
		REINFORCED CEMENT CONCRETE				
4	NS 4	Providing, placing and fixing in position 100mm thick PVC board of supreme make – CAPCELL HD100 of 100 kg/cum density at all expansion joints and separation joints at all levels and wherever specified to the required sizes, shapes, etc., complete.				
		Same as above but with 50 mm mm thick board at Expansion joints	Sqm	8.00	2,117.00	16,936.00
5	NS 5	Same as above but with 100 mm thick board at Expansion joints	Sqm	330.00	4,509.00	1,487,970.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
6	NS 6	Providing and sealing the expansion joints of 100mm thick with joint sealing systems on floors with necessary backer rod, Aluminum / S.S extrusions, Anchor bolts, sealants, tapes, SS.capping's, gaskets, etc., complete as per approved details / drawings. Cost to include drilling and fixing of extrusions using heavy duty anchor bolts, and sealing the joints capable of withstanding repeated extensions, compressions, vibrations and cyclic movement without lot of adhesion and resist deterioration by weathering, sunlight, ozone, water, salt water, oil, fuels, acids and most of the commonly used acids, etc., complete within 50% movement capacity.				
		1000 series straight works	metre	50.00	8,000.00	400,000.00
7	NS 7	Providing synthetic Spray enamel paint of approved brand and manufacture of required color to give an even shade for structural Steel works, grills, railing etc. complete as directed.	Sqm	18,020.00	127.00	2,288,540.00
		TOTAL OF REINFORCED CEMENT CONCRETE				4,193,446.00
		BRICK WORKS				
8	NS 8	Brick work flyash cement brick class designation 75 above plinth level cement mortar Super structure above plinth up to Floor V level in				
		Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	3,927.00	3,589.32	14,095,259.64
9	NS 9	Half brickwork fly ash cement brick of class designation 75 cement mortar 1:4 (1 cement : coarse sand) including scaffolding and curing etc, complete as per specification superstructure above plinth level upto floor level.				
		in Cement mortar 1:4 (1 cement: 4 coarse sand)	Sqm	2,606.00	378.41	986,136.46
		TOTAL OF BRICK WORK				15,081,396.10
		WOOD & P.V.C. WORK				
10	NS 10	Providing and fixing Dorset – Indicator bolt – IB 390,				
		For toilet (WC)	Each	66.00	365.00	24,090.00
11	NS 11	Providing and fixing Dorset CS10SS (Pair handle + Mortise lock + Cylinder)	Each	28.00	2,470.00	69,160.00
12	NS 12	Providing and fixing PANIC PUSH BAR with lock mechanism.	Each	33.00	9,535.00	314,655.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
13	NS 13	Providing and fixing Dorset CS OR SS (Pair Handle without key hole)	Each	66.00	1,220.00	80,520.00
14	NS 14	Providing and fixing door closer DC-80 EXT 9Dorset	Each	25.00	1,482.00	37,050.00
		FIRE PROOF DOORS				
		Providing & fixing in position FIRE PROOF / GENERAL PURPOSE Single leaf door leaf / Double leaf door manufactured by approved manufacturer, conforming to IS 3614 (part-2) 1992 BS 476 revisions with door frames of 1.6mm thick galvanized steel sheet press formed to rebated profile of size 100x57m with chamfered bottom frame filled with concrete and fixed in position with metallic expansion shield with counter sunk screws and door leaves made of 1.25mm thick galvanized steel sheet press formed to provide a 46mm thick fully, flush, double skin door shell, with lock seam joints at style edges with no visible joints, screws, welding on the face of the shutter. Internal reinforcements provided at top, bottom and style edges, etc complete..double leaf door shall have lipping / rebate for shutter so that there is no gap seen between two shutters.				
		The internal construction of the door is a specially designed Honey-combed structure with reinforcements at top, bottom and stile surrounds. Door to be provided with rectangular view panel as indicated in architectural drawings all as per manufacturer's specifications including necessary hardware like stainless steel imported butt hinges. mortise lock, door closer with holding option, S.S. handles of approved make, painting with Duco spray paint finish of approved colour and shade over approved primer all complete. (Measurement of door will be only on the clear finished opening provided in masonry)				
		Vision glass :Vision glass with 6mm thick clear glass of 380 dia or 200x300 mm rectangular sections or as per architectural drawing. (Make Shakti met / Signum or approved equivalent.				
		hinges : stainless steel butt hinges 3mm thick flush to frame and shutter.				
		Lock: Mortise sash lock with lever handles, mortise dead bolt, mortise latch etc.				

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		Flush bolts (Double door) : Concealed extended lever action bolts provided on the top of the door to the leading style edge.				
		Double leaf fire resistant double shutter door (2hr fire rating Electrical Room) (shutter made of 1.25 mm thick GI sheet) .				
15	NS 15	Door - D8- 1.5x2.4 m	Sqm	32.00	9,300.00	297,600.00
		Single leaf fire resistant doors 2 hr fire rating (shutter made of 1.25 mm thick GI sheet) @ fire staircase				
16	NS 16	D-7 Fire escape single shutter 1.5x2.4m and D-16 Electrical and data duct single shutter 0.75x2.1m.	Sqm	254.00	9,430.00	2,395,220.00
17	NS 17	General purpose door	Sqm	390.00	7,560.00	2,948,400.00
18	NS 18	Providing, fabricating assembling and fixing in position powder coated aluminum door using following aluminum matte or glossy finish powder coated sections.				
		OUTER FRAME: 63.5 mm x 38.1mm x 1.7 mm - Jindal Section #4648 @ 1.148 kg/m				
		DOOR SHUTTER				
		Vertical section: 85.00mm x 44.45mm x 1.8mm - Jindal Section #4526 @1.302 kg/m				
		Top Section: 83.50mm x 44.45mm x 1.62mm - Jindal Section #4589 @1.139 kg/m				
		Centre Section: 83.50mm x 44.45mm x 1.62mm - Jindal Section #4589 @1.139 kg/m				
		Bottom Section : 114.3mm x 44.45mm x 3.18mm - Jindal Section #4530 @ 2.646 kg/m				
		All the sections should be powder coated to approved color and shade, cut to length, joints mitred and corners grinded. The bottom hand rail hinged with heavy duty aluminum alloy including providing and fixing standard approved accessories such as aluminum handles, tower bolts, cylindrical locks, EPDM gasket and beadings as required, 5mm thick glass for top and bottom panel. All the aluminum sections used should be treated for removal of any rust and prevention of further rust formation and coated with greasy materials for non adherence of mortar or any other sticky material and this coating shall be cleaned thoroughly prior to handing over.				

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		The assembled frame should be stiffened with corner angle, strips and fixed with screws, rawl plugs and teak wood guttas / anchor fasteners to RCC column or masonry on sides, beams and flooring at bottom including cutting, chiselling and making good with cement mortar to match the surface. All the frames should be thoroughly cleaned, free from rust, scale or dirt, with all lead and lift. INCLUDING DORMA FLOOR SPRINGS				
		The rate shall include providing & removing scaffolding if necessary, cost of all materials, cost of labour, cost of equipment and machinery, all lead and lift, loading and unloading, transportation, and all other incidental charges etc. complete. The sizes & drawings shown are indicative and are subject to changes - No claim for extra will be entertained for any deviations / changes in dimensions and subdivisions that are made to the drawings during the execution phase. The work shall be carried out as per the drawings issued and under the directions of the Engineer-In-Charge.	Sqm	261.00	7,000.00	1,827,000.00
19	NS 19	Providing and fixing powder coated (approved shade) Louvered ventilators with 'Z ' Type Aluminium louvers of JINDAL make section 63.5x34.93x1.45 mm no 8775 @ 0.429 Kg/Rmt fixed to glazing clip 44.45x3.04 mm @ 0.137 kg/Rmt section no 4432 including providing and fixing this louver panel to Aluminium frame of size 50.8x38.1x3.05 mm @ 1.363 kg/ Rmt section no 2404, cost of bug mesh, including cutting, mitring joints, fixing to masonry or concrete openings sealing all round with approved water proof sealant and making it water proof etc as directed complete. At all levels.	Sqm	249.00	5,940.00	1,479,060.00
20	NS 20	Providing and fixing of 63x38mm partition powder coated frame work with 8mm clear float toughened glass with 85 x 65mm profile attached to the partition member with all standard accessories to suit the overall sizes.	Sqm	554.00	7,893.00	4,372,722.00
		PATCH FITTING DOORS				

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
21	NS 21	Providing and fixing double leaf door using 10mm thick clear, Toughened glass of approved make, supported on stainless steel (brush-finished) top and bottom hung patch fittings and Floor spring of DORMA or equivalent make. The glass panel edges shall be properly machine polished. Rate to include providing necessary hardware like handles, patch lock, heavy duty floor springs etc., of Dorma or equivalent make.	Sqm	114.00	8,510.00	970,140.00
		ALUMINIUM CAPPING WORKS				
22	NS 22	Aluminium Capping section : Providing and fixing Aluminium band composed of Aluminium extrusions of size 450 mm x 60 mm fixed to the structural glazing to shapes and profiles called for in the detailed drawing.	RM	565.00	3,500.00	1,977,500.00
23	NS 23	Fabricating, supplying and installing in position ALUMINIUM COMPOSITE PANEL cladding either straight or curved in plan of approved make comprising POLYETHYLENE CORE sandwiched between two skins of 0.5mm thick special alloyed aluminium sheet to have overall thickness of 4mm cladding to masonry / concrete faces as called for including appropriate and adequate frame work in aluminium to receive the composite panel to shapes and profiles of approved make. Allow for anchoring the panel work to masonry / concrete in approved manner, all fixing and other accessories and all incidental work complete with complete water tightness using backer rod and approved make of weather sealant. The cladding has to be sides and faces of columns / piers, to cills and soffits of window openings, returned over copings,etc, to line and level. Over all girthed area trims shall be measured.	sqm	1,715.00	4,500.00	7,717,500.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
24	NS 24	Providing and fixing LUXALON SL-4 Louvers in 84R Plain Panel manufactured by M/s. Hunter Douglas India Pvt. Ltd or equivalent. of approved colour consisting of panel 84 mm wide x 16mm deep x 0.6mm thick with round edges panel length upto 6mtrs coil coated on a continuous paint line double baked and roll formed from enameled corrosion Resistance Aluminium Alloy AA3005 (Al.Mg.) for higher strength and good Roll forming characteristics. Panels shall be clipped at a distance of 86 mm to baked enameled Aluminium SL-4 panel stringer 33mm wide and 86mm deep x 0.95 mm thick in a standard length of 5mtrs made of double baked enameled Aluminium Alloy AA5050 (Al.Mg.) white to hold the panel in a module of 86mm centre to centre. The prongs on SL-4 stringers shall be to accommodate an angle of 21.30 Degrees between two panels. SL-4 stringers shall be fixed at 150 mm from panel ends and at a distance of maximum 900 mm center to center across the panel span.				
		The carrier shall be fixed to a suitable structure by means of rigid fixing details. All properties and specifications shall comply with ECCA directives and more specifically. EN 1396:1996				
		Paint Finish: Panel shall be stove enameled and finished with Luxacote, a patented special three layered coating system (consisting of first a conversion layer of thickness 800-2000mg/sq mtr, a polyurethane basecoat of 16-20 microns, and a special top coat of polyamide particles of 8-12 microns thick to provide excellent abrasion and damage resistance) in a continuous coil coating process of the approved colour on the exposed side and the reverse side with epoxy.				
		Terrace & Elevation area.	Sqm	1,168.00	5,290.00	6,178,720.00
25	NS 25	UPVC WINDOWS				

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
25 a	NS 25 a	Providing, supplying & fixing of glazed 2 Track -2 Panel Sliding Windows cum Fixed panels with mesh and top fixed of 450 mm made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with Galvanized Iron profiles through out the window. The outer frame having a overall size of 60 x 45mm with reinforcement of 1 mm thickness and sash with overall size of 39 x 58 mm with reinforcement of 1.5 mm thickness. Glazing bead for fixing of glass shall be of size 20 x 18mm and coextruded with gasket. The flymesh adaptor for mesh shall be of overall size 25 x 34mm and screen sash of overall size 18.5 x 42.5 mm.Fiber Glass mesh shall be provided in mesh shutter. The outer frame for the fixed part shall have a overall size of 60 x 55 mm with reinforcement of 1mm thickness and Glazing bead for fixing of glass shall be of size 34 x 20mm and coextruded with gasket. Windows shall be provided with 5mm thick SOLAR glass and standard hardware. Each sliding shutter shall be provided with 2nos of flat nylon rollers and 1 no powder coated die cast aluminium touch lock. Wall thickness of frame & sash shall be 2 - 2.2 mm. (Approved as per Architects	Sqm	350.00	5,312.00	1,859,200.00
25 b	NS 25 b	Providing, supplying & fixing of glazed 3Track - 2 Panel Sliding Window cum fixed panel With Mesh of height 1500 mm made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with GI throughout the window. The sliding outer frame having a overall size of 108 x 45 mm with reinforcement of 1 mm thickness, sash with overall size of 39 x 58 mm with reinforcement of 1.5 mm thickness, mesh sash of overall size 30 x 48.5 mm reinforced with 1.5 mm of GI. Glazing bead for fixing of glass shall be of size 20 x 18mm and coextruded with gasket. Fiber Glass mesh shall be provided in mesh shutter. Windows shall be provided with 5 mm thick SOLAR glass and standard hardware .Each shutter shall be provided with 2nos of flat nylon rollers and 1 no powder coated die cast aluminium touch lock. Wall thickness of frame & sash shall be 2 - 2.2 mm. (Approved as per Architects & Client)	Sqm	350.00	5,691.00	1,991,850.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
25 c	NS 25 c	Providing, supplying & fixing of Fixed Louvered Ventilator made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with Galvanized Iron profiles through out the window. The outer frame having a overall size of 60 x 55 mm with reinforcement of 1 mm thickness and Mullion with overall size of 74 x 60 mm with reinforcement of 1 mm thickness. Ventilator shall be provided with 4.5 mm Pin Head glass, standard hardware. Wall thickness of frame & Mullion shall be 2 - 2.2 mm (Approved as per Architects & Client)	Sqm	37.00	5,314.00	196,618.00
		STRUCTURAL GLAZING WORKS				
26	NS 26	Fabricating, supplying & installing pressure equalized, ventilated and drained Schueco TROPTEC FACADE SC 50 SG.NI system or equivalent performance system of other reputed brand to be approved by the Architects / glazing consultant / Client to external faces of the building consisting of main panel work of vertical Mullion and Horizontal Transom made from extruded colour anodized Aluminum (20 Microns minimum thickness) sections of 6063-T6 Grade, as per IS 8147-1976 Anchored to RCC elements with structurally adequate MS brackets (hot dip Galvanized 80-100 micron thick) & clamps.				
		The transom should overlap the mullion with an EPDM separator. Supply of all stainless steel screws, hardware, EPDM gaskets and accessories from system supplier. Glass to be fixed to the mullion using concealed toggles. Sub-frame is allowed only in the spandrel area with single glass. Glass to Glass joint to be 20mm and sealed with non-bleeding sealant or silicone gasket. The facade and the projected fin should comply with Design wind pressure in Rourkela for 150 kg/sqm . The deflection criteria shall be L/175 or 19mm whichever is the least. Facade design should allow for building movements (wind deflection) of H/500.(H= building ht from Formed ground level). The Facade should comply with air infiltration at 300 Pa (EN 12152) and Static water penetration at 600 Pa (EN 12154). All anchor fasteners to be made of SS 304 grade.				

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		Spandrel in-fills with insulation backing (50 mm thick semi-rigid Black/White tissue faced phenol bonded glass wool at a density of 48 kg. per cum & 1mm thick powder coated galvabond backing) including brackets, fasteners, all incidental works, etc as per the manufacturer's detail and approved by the Architects / glazing consultant / Client.				
		Rate shall include fire dampers in powder coated galvabond sheet formed sections to required profile with smoke seal of minimum 100mm depth filled with 50 mm thick glass wool at a density of 100 kg. per cum at floor all floor level, anodized/ powder coated Aluminum flashings & trims wherever required, etc. Provide openable panels of Schueco AS 58.NI system complete with appropriate hardwares, 2/4 point locking system with corner mechanisms and imported handles, including application of weather proof sealant of approved make & color in locations as per requirement. All Aluminum sections to conform 6063-T6 Grade as per IS 8147-1976 members shall be colour anodized to approved color (20 Microns minimum thickness) in an anodizing plant fully equipped for such works.				
		Overall area including glazed panels shall be measured. The areas of the individual components of the structural glazing such as vision panels, spandrel panels & openable panels etc shall be arrived at based on the center to center measurements between the grooves. Vendor to provide technical & as built drawings (which will be approved by the Architects / glazing consultant / Client) and details and Design wind pressure in Rourkela to be considered as 150 kg/sqm inclusive of factor of safety for the Design of the Structural members, Glass panel, MS Brackets and Anchors.				
a	a	Vision Area with SGU Cool- LITE Turquoise ST - 436 Single glazed made of 6mm thick heat strengthened glass : at North ,East & West sides	Sqm	4,865.00	9,000.00	43,785,000.00
b	b	Vision Area with DGU Cool- LITE Turquoise ST - 436 Double glazing made of 6mm thick heat strengthened glass + 12mm air gap + 6mm thick clear annealed glass.	Sqm	1,121.00	11,000.00	12,331,000.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
c	c	Extra for providing top hung openable shutters with 2/4 point locking system, handles etc. in SGU Areas	Sqm	730.00	3,750.00	2,737,500.00
d	d	Extra for providing top hung openable shutters with 2/4 point locking system, handles etc. in DGU areas	Sqm	168.00	4,500.00	756,000.00
27	NS 27	Providing and fixing Dorma Clamp facade system with tempered laminated safety glass (8CT+1.52PVB+8CT) m including, Dorma SS 316 spider, SS 304 clamp, SS 304 custom made RHS drop brackets, Dow corning structural silicon sealant, Hilti anchors for withstanding wind pressure of 2.5KPa.etc complete as directed.	sqm	117.00	25,800.00	3,018,600.00
		TOTAL OF WOOD & P.V.C WORK				97,365,105.00
		STEEL WORKS (MS)				
28	NS 28	Providing and fixing GI weld mesh of size 50x50x2.9mm (10 gauge) including fixing to the frame with necessary bolts etc complete.	Sqm	191.00	486.20	92,864.20
		Stair case hand rail(SS)				
29	NS 29	Providing and fixing a Single line of Stainless of SS 316 grade, brush finished rounds of 50 mm dia with necessary accessories of maximum 150 to 300 mm height as directed over masonry /RCC/ Structural member complete all as per drawings including the cost of all materials, cost of labour, cost of equipment, machinery, all lead and lift, loading and unloading, transportation and all other incidental charges etc, complete. The work shall be carried out as per direction of engineer incharge. make : OZONE or equivalent.				
		Single rail over parapet	Rmt	1,974.00	2,000.00	3,948,000.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
30	NS 30	Providing fabricating & erecting SS hand rails about 1.0 m height as per design & drawings for Staircases. using 50mm dia SS 304 grade pipe for top member, 40mm dia for verticals at about 900 mm centre to centre, and 5 nos of 20mm dia pipe lateral runners in the middle including all accessories , stainless steel fastners, SS bolts etc of required size on top of floor, steps, side/top of waist slab as directed including SS welding, buffing etc as directed. For measurement only the sloping length of rail and height above nosing of treads will be considered for measuring the area. individual railing will not be measured.	Sqm	1,322.00	6,200.00	8,196,400.00
		TOTAL OF STEEL WORKS				12,237,264.20
		FLOORING				
31	NS 31	Providing and laying 3.2 mm thick Rubberized flooring for Auditorium and seminar hall of approved make.				
a	a	Flooring	Sqm	1,152.00	1,865.00	2,148,480.00
b	b	same as above for skirting.	Sqm	47.00	1,865.00	87,655.00
32	NS 32	Providing and fixing PVC edge beading at corners for tile fixing as per manufacturers specification.	Rmt	322.00	60.00	19,320.00
33	NS 33	Providing and laying 18mm thick Granite stone flooring, as per sample of Granite approved by Engineer-in- charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry including, rubbing and polishing complete with :	Sqm	13,462.00	2,760.00	37,155,120.00
		TOTAL OF FLOORING				39,410,575.00
		ROOFING				
34	NS 34	Supplying and fixing 22 mm thick multicell DANPALON for roofing work / sky lights etc including all necessary approved fixtures and fastners etc complete including necessary Flashing wherever required.	Sqm	426.00	5,500.00	2,343,000.00
35	NS 35	Supplying and fixing 12 mm thick multicell DANPALON for roofing work / sky lights etc including all necessary approved fixtures and fastners etc complete including necessary Flashing wherever required.	Sqm	931.00	4,232.00	3,939,992.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
36	NS 36	Providing and fixing trap door manufactured from 19 mm Block Board with 50x50 mm hard wood frame work including necessary Fixtures and fastners etc complete as directed as per architectural drawings.	Sqm	64.00	3,200.00	204,800.00
		TOTAL OF ROOFING				6,487,792.00
		FINISHING				
37	NS 37	Providing and applying 2 or more coats (to ensure adequate coverage)of Asian Paints Apex Ultima paint or equivalent including surface preparation and application of exterior wall primer – all as per manufacturer's specification	Sqm	19,000.00	210.00	3,990,000.00
38	NS 38	Providing and applying 2 or more coats (to ensure adequate coverage) of Asian Paints Duracast Fine Tex paint or equivalent including surface preparation and application of exterior wall primer – all as per manufacturer's specification.	Sqm	9,891.00	231.00	2,284,821.00
		TOTAL OF FINISHING				6,274,821.00
		WATERPROOFING WORK				
39	NS 39	Providing and laying in position cement concrete(Brick bat concrete) of specified grade excluding the cost of centering and shuttering 1:5:10 (1 cement : 5 coarse sand : 10 Brick aggregate 40 mm nominal size) for sunken floors.				
		In Kitchen / Pantry /Toilet and Other locations at all levels	Cum	260.00	3,396.00	882,960.00
40	NS 40	Providing and applying of cementitious crystalline based waterproofing for concrete rafts, wall, water tanks, concrete floors, Positive & Negative Sides of the Retaining Wall etc. With crystalT1/T2system. The application to bed one from -ve (negative)/+ve (positive) side on a wet open pore concrete surface with brush @ 0.8Kg of crystal T2 as per manufacture specification. Including making grooves of 10x15mm size on the construction joints and treating with crystal T1:1 part of clear water as per manufactures specification etc. And as per direction of engineer-in-charges. The rate also includes the clearing of surface to be treated with air compressor wherever required.	Cum	8,094.00	737.00	5,965,278.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		TOTAL OF WATER PROOFING WORK				6,848,238.00
41	NS 41	CARPETING Supplying & fixing of 4.3mm thickness heavy commercial range flocked flooring with advantage of water proof, antifungal, allergy proof sanitized, total weight 1.8 kg/m ² , fire resitant, stain resitant duly installed at floor.	Sqm	50.00	3,008.00	150,400.00
42	NS 42	Providing and installing of Accolade plus impregnated PUR Vinyl Sheet flooring 6 feet (1.83m) wide in Rolls having a nominal total thickness of [0.08 in (2mm)] of approved colour and shade laid over smooth, flat, hard and free from moisture, grease etc. using water based adhesive like VC 31 of pidilite or similar Accolade plus shall confirm to group P of wear Resistance as per EN 660-2 Fire Resistance of more than 11KW/m ² as per ISO 9329-1.	Sqm	50.00	2,193.00	109,650.00
43	NS 43	Providing and fixing Acid Proof Tiles 300x300mm Premium Quality of approved colour & shade laid over 20mm thick cement mortar 1:4 (1 cement :4 Coarse sand) jointed & pointed in white cement mixed with pigment to match the shade of the tile.	Sqm	50.00	1,084.00	54,200.00
44	NS 44	Providing & fixing Float Glass 4mm thick (10Kg / Sqm) with steel beading of approved shape & section with screws in pressed steel door, window & CSW's Frames/Shutter & M.S. Tubular section shutters of doors & windows.	Sqm	50.00	610.00	30,500.00
45	NS 45	Supplying and Fixing Drapery rods 30mm dia of M.S Pipe of thickness 1.6mm with powder coating (wooden finish) including metal brackets, rings and ends all as specified. Fixed to brick walls/RCC lintels with dash fastners.	Rmt	50.00	150.00	7,500.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
46	NS 46	Acoustic wall cladding : Providing and fixing Ecophon SUPER G A with 40 mm natural square edge, demountable panels with the option of weekly wet cleaning (Akutex T and Super G surfaces) and vacuum cleaning (Colorado surface), manufactured from High density glass wool, with the visible surface has an Akutex T coating, a glass fibre fabric (TEXONA) or a strong glass fibre (Super G) and the back of the tile should be covered with glass tissue. The glass wool core of the tiles should be tested and classified as non combustible according to prEN ISO 1182. The system should have Sound Absorption NRC value of 0.9 (according to EN ISO 11654). Tiles should withstand a permanent ambient RH upto 95% at 30 * C without sagging, warping or delaminating (ISO 4611). The light reflectance of the tiles should not be less than 84% (for Akutex T surface)	Sqm	1,287.00	6,073.40	7,816,465.80
47	NS 47	ACOUSTICAL FALSE CEILING Providing and fixing of Armstrong Mineral Fibre Acoustical Suspended Ceiling System with Fire fissured (Micro Look) edge tiles with Armstrong superfine 15mm exposed grid in module size 600x600x16mm with Bio Block Casting on the face of the tile. The grid shall be 15mm wide T-Section flanges colour white, main runner 1200mm & 600mm Cross Tees.	Sqm	892.00	2,141.00	1,909,772.00
48	NS 48	Providing and applying cementitious crystalline based waterproofing for concrete rafts, walls, water tanks, slabs, concrete floors etc. with krystol T1 system. The application to be done from +ve (postive) /-ve (negative)side on a wet open pore concrete surface with brush @ 1 Kg/Sq.M as per manufacturer specification.	Sqm	50.00	441.00	22,050.00
49	NS 49	Providing and applying Silicon Based Water repellent coating by brush or by spray.	Sqm	50.00	232.00	11,600.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
50	NS 50	WOODEN FLOORING Providing and fixing wooden flooring of 25mm thick with pre laminated flat pressed three layer Engineered Hard Wood Flooring on Stage of Armstrong or equivalent make exterior grade including edge profiles as may be required in desired shape and size of approved colour and texture. including front cladding of stage riser 38mm thick parquet (wood block) flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 stone aggregate 10mm nominal size) to be paid separately coated with thin layer of hot bitumen (blown type) @ 2.45 kg per sqm including gfixing blocks in position after dipping in hot bitumen (blown type) upto half depth, planed, leveled smooth and finished complete.	Sqm	50.00	4,913.00	245,650.00
51	NS 51	Providing and fixing Ceramic designer tiles of size 300x450mm to 300x600mm as in dado (upto 2.10m height) over 15mm thick cement mortar 1:4 [1cement : 4 coarse sand] set, jointed with neat cement slurry & pointed with white cement using pigment to match the shade of colour of the tile. meeting edges of the tile to be chamfured.	Sqm	50.00	1,455.00	72,750.00
52	NS 52	Providing and fixing of SS Handle 100 mm (Kitch make, C type)	Each	10.00	231.00	2,310.00
53	NS 53	providing and fixing of SS Aldrop 14x300mm SS matt finish with necessary screws etc,. Complete.(make: AKS,Ebco,Ozone,Dorma or equivalent)	Each	10.00	439.00	4,390.00
54	NS 54	providing and fixing of SS towerbolt 10x150mm SS matt with necessary screws etc,. Complete.(make: AKS,Ebco,Ozone,Dorma or equivalent)	Each	10.00	147.00	1,470.00
55	NS 55	providing and fixing of SS towerbolt 10x300mm SS matt with necessary screws etc,. Complete.(make: AKS,Ebco,Ozone,Dorma or equivalent)	Each	10.00	407.00	4,070.00
56	NS 56	Providing and fixing of SS hanging type door stopper with necessary screws etc.	Each	10.00	300.00	3,000.00

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		SUB TOTAL				10,445,777.80
		TOTAL OF CIVIL WORK BOQ FOR MAIN BUILDING NON DSR ITEMS				200,618,488.16

SHCEDULE OF FINISHES			
S.NO.	ITEM	DESCRIPTION	MATERIAL
A STRUCTURE			
1	ROOFS – FLAT	TYPE	RCC
2	RETAINING WALLS	TYPE	RCC
3	BUILDING WALLS	TYPE	Solid Fly-Ash Block masonry, FPS bricks
4	TOILET PARTITIONS	TYPE	100 mm thk masonry with tile dado
5	PARTITIONS	TYPE	Plywood partition with wooden framework (will be done under interior scope)
B PLASTERING & FALSE CEILING			
1	INTERNAL PLASTERING		
	INTERNAL FACE OF EXTERNAL WALL	TYPE	Smooth cement plaster with Asian paint wall putty
	INTERNAL WALLS	TYPE	Smooth cement plaster
	CEILING	TYPE	Smooth cement plaster
2	EXTERNAL PLASTERING	TYPE	Sand faced cement plaster
C FLOORING – BUILDING & SITE			
1	AUDITORIUM-SEMINAR BLOCK	TYPE	Grano Flooring + edge protection angles + Rubberized flooring
2	LIBRARY & OFFICE SPACES	TYPE	Vitrified Tiles
3	PLAZA & INFORMAL ACTIVITY ZONES		Sandstone + Tact Tiles
4	LOBBIES & CORRIDORS	TYPE	Polished Granite
5	RAMPS	TYPE	Sandstone + Tact Tiles
6	STAIRCASES	TYPE	Open stairs and steps – Polished granite. Treads to have anti-skid grooves / flamed strips.
		TYPE	Closed staircase – Kota
7	PARKING	TYPE	Grano flooring + Epoxy paint for parking slots
8	SERVICES AND UTILITY ROOMS	TYPE	Grano flooring
9	BALCONIES	TYPE	Water-proofing + Kota
10	TERRACE	TYPE	Water-proofing + Heat-resistant tiles
11	COPING – BUILDING	TYPE	Polished Granite
12	COPING – SITE	TYPE	Red Sandstone
13	ROADS	TYPE	Bituminous roads with soling, WBM & hume pipe crossings.
14	HARD PAVED SURFACES	TYPE	Shot-blasted flexi-pavers
15		BRAND	Basant betons or equivalent
16	KERBS	TYPE	Concrete kerb stones, cast in-situ
17	DRAINS	TYPE	RCC box drains on one side of the road with cast in-situ drain covers.
18	INTERNAL SURFACE DRAINS	TYPE	GI grating

CIVIL WORKS BOQ FOR SITE

- 1 DIVIDER
- 2 SUMMARY OF CIVIL WORKS BOQ FOR SITE
- 3 CIVIL WORKS BOQ DSR ITEMS FOR SITE
- 4 CIVIL WORKS BOQ NON DSR ITEMS FOR SITE

SI No	ITEMS	Amount as per DSR Rates [Rs]	Amount as per NON DSR Rates [RS]	Total of DSR and NON DSR works [Rs]
	SUMMARY OF CIVIL WORKS FOR SITE			
1	CARRIAGE OF MATERIALS	881,524.22		881,524.22
2	EARTH WORK	3,883,606.35		3,883,606.35
3	CONCRETE WORK	4,056,835.70		4,056,835.70
4	READY MIX CONCRETE CONCRETE	23,230,276.60		23,230,276.60
5	MASONRY WORKS	1,247,380.65		1,247,380.65
6	STONE WORK	407,038.70		407,038.70
7	STEEL WORKS (MS)			0.00
8	FLOORING	3,387,253.25		3,387,253.25
9	CIVIL WORKS BOQ FOR SITE	317,591.70		317,591.70
10	ROAD	491,186.00		491,186.00
11	DRAINAGE	55,448.00		55,448.00
12	NON SCHEDULE ITEMS	0.00	11,770,720.00	11,770,720.00
	TOTAL OF CIVIL WORKS FOR SITE	37,958,141.17	11,770,720.00	49,728,861.17

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		CIVIL WORKS BOQ FOR SITE DSR ITEMS				
1	1	CARRIAGE OF MATERIALS				
	1.1	Carriage of materials by mechanical transport including loading , unloading and stacking.				
1.01	1.1.2	Earth Up to 1 Km	Cum	10,649.00	82.78	881,524.22
		TOTAL OF CARRIAGE OF MATERIALS				881,524.22
2	2	EARTH WORK				
2.01	2.3	Banking excavated earth in layers not exceeding 20cm in depth, breaking clods, watering, rolling, each layer with 1/2 tonne roller, or wooden or steel rammers, and rolling every third layer and top most layer with power roller of minimum 8 tonnes and dressing up , in embankments for roads, flood banks, marginal banks, and guide banks etc, lead up to 50 mtrs and lift up to 1.5 mtr.				
2.01.1		All kinds of soil	Cum	945.00	181.25	171,281.25
2.02	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be leveled and neatly dressed.				
2.02.1	2.6.1	All kinds of soil	Cum	23,342.00	129.35	3,019,287.70
		site grading				
2.03	2.7	Earth work in excavation over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 Sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be leveled and neatly dressed :				
2.03.1	2.7.1	Ordinary rock – site grading	Cum	100.00	197.75	19,775.00
2.03.2	2.7.3	Hard rock (blasting prohibited)	Cum	100.00	490.10	49,010.00
2.04	2.8	Earth work in excavation 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 up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 m.				
2.04.1	2.8.1	All kinds of soil	Cum	4,503.00	130.80	588,992.40

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.05	2.9	Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m 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 soils as directed, within a lead of 50 m.				
2.05.1	2.9.1	Ordinary rock	Cum	150.00	212.00	31,800.00
2.06	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.				
2.06.1	2.26.1	All kinds of soil	Cum	100.00	34.60	3,460.00
		TOTAL OF EARTH WORK				3,883,606.35
3	4	CONCRETE WORK				
3.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level:				
3.01.1	4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cum	1,129.00	3,593.30	4,056,835.70
		TOTAL OF CONCRETE WORK				4,056,835.70
4	5	REINFORCED CEMENT CONCRETE				
4.01	5.1	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:				
4.01.1	5.1.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	582.00	4,703.90	2,737,669.80
		R wall				
4.02	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:				
4.02.1	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sqm	741.00	166.90	123,672.90
		R wall				
4.02.2	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	5,993.00	285.15	1,708,903.95
4.02.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sqm	951.00	311.20	295,951.20

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
4.03	5.22	Steel reinforcement for RCC. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
4.03.1	5.22.6	Thermo-Mechanically Treated bars.	Kilogram	166,580.00	62.25	10,369,605.00
4.04	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, 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.				
		(Note :- Cement content considered in this item is @ 330 Kg/Cum. Excess/less cement used as per design mix is Payable / recoverable separately).				
4.04.1	5.33.1	All works upto plinth level	Cum	697.00	5,242.15	3,653,778.55
4.05	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of 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 the Engineer - in - charge.				
		(Note :- Cement content considered in this item is @ 330 Kg/Cum. Excess/less cement used as per design mix is Payable / recoverable separately).				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
4.05.1	5.37.1	All works upto plinth level	Cum	442.00	5,590.60	2,471,045.20
4.05.2	5.37.2	All works above plinth level upto floor V level	Cum	305.00	6,130.00	1,869,650.00
		TOTAL OF REINFORCED CEMENT CONCRETE				23,230,276.60
5	6	BRICK WORKS				
5.01	6.4	Brick work with Common burnt clay FPS (non modular) Brick of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and size in:				
5.01.1	6.4.1	Cement mortar 1:4 (1 cement: 4 coarse sand)	Cum	259.00	4,067.85	1,053,573.15
5.01.2	6.4.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	50.00	3,876.15	193,807.50
		TOTAL OF BRICK WORK				1,247,380.65
6	7	STONE WORK				
6.01	7.8	Coursed rubble masonry with hard stone (First or second sort) in super structure above plinth level and up to floor V level.				
6.01.1	7.8.2	Masonry work(Second sort), in cement mortar 1:6(1 cement: 6 coarse sand)	Cum	107.00	3,804.10	407,038.70
		TOTAL OF STONE WORK				407,038.70
8	11	FLOORING				
8.01	11.29	40mm thick fine dressed stone flooring over 20 mm (Average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand), including pointing with cement mortar 1:2 (1 cement : 2 Stone dust) with an admixture of pigment to match the shade of stone.				
8.01.1	11.29.2	White sand stone	Sqm	5,842.00	557.50	3,256,915.00
8.02	11.31	Extra for pre-finished nosing in treads of steps of kotah stone / sand stone slab.	meter	2,485.00	52.45	130,338.25
		TOTAL OF FLOORING				3,387,253.25
9	13	FINISHING				
9.01	13.4	12 mm cement plaster of mix :				
9.01.1	13.4.1	1:4 (1 cement : 4 coarse sand)	Sqm	2,227.00	132.10	294,186.70
9.02	13.5	15 mm thick cement plaster on rough side of single or half brick wall mix:				
9.02.1	13.5.1	1:4 (1 cement : 4 coarse sand)	Sqm	100.00	153.60	15,360.00

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
9.03	13.47	Finishing walls with Premium Acrylic smooth exterior paint with silicone additives of required shade:				
9.03.1	13.47.1	New work (two or more coats applied @ 1.43lit/10 Sqm over and including priming coat of exterior primer applied @ 2.20 lit/10 Sqm)	Sqm	100.00	80.45	8,045.00
		TOTAL OF FINISHING				317,591.70
10	16	ROAD WORK				
10.01	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating the earth to an average of 22.5 cm depth, dressing to camber and consolidating with power road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead up to 50 metres.	Sqm	3,360.00	61.25	205,800.00
10.02	16.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give atleast 95% of the maximum dry density (proctor density).	Cum	1,008.00	7.75	7,812.00
10.03	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete 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	Cum	55.00	5,046.80	277,574.00
		TOTAL OF ROAD WORK				491,186.00
11	19	DRAINAGE				
11.01	19.6	Providing and laying non pressure NP2 class (light duty) RCC 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:				

Sl. No.	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
11.01.1	19.6.3	250mm dia. R.C.C. pipe	RMT	40.00	342.45	13,698.00
11.01.2	19.6.4	300mm dia. R.C.C. pipe	RMT	40.00	422.90	16,916.00
11.01.3	19.6.5	450mm dia. R.C.C. pipe	RMT	40.00	620.85	24,834.00
TOTAL OF DRAINAGE						55,448.00
TOTAL OF CIVIL WORKS BOQ FOR SITE DSR ITEMS						37,958,141.17

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		CIVIL WORKS BOQ FOR SITE NON DSR ITEMS				
12.0		NON SCHEDULE ITEMS				
1	NS 1	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	100.00	300.00	30,000.00
2	NS 2	Providing and fixing shot blasted 65 mm thick Flexi pavers of basant baton or equivalent make of approved colour and size including cost of 50 mm thick well consolidated sand cushion, watering curing etc complete. (Basant betons or equivalent)				
		For 7.2m wide pathway	Sqm	3,360.00	1,694.00	5,691,840.00
3	NS 3	Providing and fixing a Single line of Stainless of SS 316 grade, brush finished rounds of 50 mm dia with necessary accessories of maximum 150 to 300 mm height as directed over masonry / RCC / Structural member complete all as per drawings including the cost of all materials, cost of labour, cost of equipment, machinary, all lead and lift, loading and unloading, transportation and all other incidental charges etc, complete. The work shall be carried out as per direction of engineer incharge. make : OZONE or equivalent.				
		Railing for Physically challenged	Rmt	284.00	2,000.00	568,000.00
4	NS 4	Providing and fixing Tactile flooring for pathways for use of physically challenged persons .	Sqm	124.00	1,520.00	188,480.00
5	NS 5	Providing and laying 18mm thick Granite stone flooring, as per sample of Granite approved by Engineer-in- charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry including, rubbing and polishing complete with :	Sqm	210.00	2,760.00	579,600.00
6	NS 6	Providing and laying 500x500x40 mm thick Turf paver (Turf pave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and base course and filling with 150 mm thick local sand, including spreading, well ramming, consolidating and finishing smooth etc. all complete as per direction of Engineer-in-charge	Sqm	1,000.00	4,712.80	4,712,800.00
		TOTAL OF CIVIL WORKS FOR SITE NON DSR ITEMS				11,770,720.00

ELECTRICAL WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF ELECTRICAL WORKS BOQ
- 3 LIGHTNING ARRESTOR BOQ FOR NON DSR ITEMS
- 4 ELECTRICAL BOQ FOR DSR ITEMS
- 5 ELECTRICAL BOQ FOR NON DSR ITEMS
- 6 LIST OF APPROVED MAKES

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON DSR Rates	Total of DSR and NON DSR works
	SUMMARY OF ELECTRICAL WORKS			
1	COPPER WIRING IN PVC CONDUIT	14,117,170.00		14,117,170.00
2	STEEL / PVC CONDUIT, METAL BOXES	3,257,071.50		3,257,071.50
3	MCB & PRE-WIRED MCB DISTRIBUTION BOARDS	1,332,703.00		1,332,703.00
4	BUS TRUNKING AND OVER HEAD BUSBAR SYSTEM	2,112,113.00		2,112,113.00
5	CABLE TRAYS	906,678.00		906,678.00
6	EARTHING	811,094.00		811,094.00
7	LIGHTNING CONDUCTOR	288,315.00		288,315.00
8	MV CABLE LAYING	716,140.50		716,140.50
9	MV CABLE JOINTING AND END TERMAINATION	126,168.00		126,168.00
10	TOTAL OF NON DSR ITEMS		45,911,722.99	45,911,722.99
TOTAL		23,667,453.00	45,911,722.99	69,579,175.99

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		ELECTRICAL WORKS BOQ FOR DSR ITEMS				
1		COPPER WIRING IN PVC CONDUIT				
1.1	1.10	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 modular switch, modular plate, suitable GI box and earthing the point with 1.5 Sq mm FR PVC insulated copper conductor single core cable etc as required				
	1.10.3	1.10.3 Group C - LIGHT POINTS	Point	3,000.00	664.00	1,992,000.00
	1.10.3	1.10.3 Group C - CEILING FAN POINTS, with GI box and modular plate etc., (without stepped type electronic fan regulator)	Point	100.00	664.00	66,400.00
	1.10.3	1.10.3 Group C - WALL FAN POINTS	Point	30.00	664.00	19,920.00
	1.10.3	1.10.3 Group C - CALLING BELL POINT	Point	12.00	664.00	7,968.00
	1.10.3	1.10.3 Group C - EXHAUST FAN POINT	Point	25.00	664.00	16,600.00
1.2	1.4	Wiring for twin control light point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed pye conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required.	Point	62.00	990.00	61,380.00
1.3	1.12	Wiring for light /power plug with 2X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed PVC conduit alongwith 1 No 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Rmt	1.00	162.00	162.00
1.4	1.13	Wiring for light/ power plug with 4X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed PVC conduit alongwith 2 Nos 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Rmt	10.00	268.00	2,680.00
	1.14	Subsequent light point in group control with avrage of three(3) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Point	2,500.00	321.00	802,500.00
1.6	1.14	Subsequent light point in group control with avrage of TWO (2) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Point	600.00	214.00	128,400.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
1.7	1.14	Subsequent light point in group control with avrage of ONE (1) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Point	100.00	107.00	10,700.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
1.8	1.14	Subsequent light point in group control with avrage of four (4) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Nos.	10.00	428.00	4,280.00
1.9		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				
	1.14.1	2 X 1.5 sq. mm +1 X 1.5 sq. mm earth wire	Rmt	10.00	107.00	1,070.00
	1.14.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	30,000.00	131.00	3,930,000.00
	1.14.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	10,000.00	162.00	1,620,000.00
	1.14.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	20.00	206.00	4,120.00
	1.14.5	2 X 10 sq. mm + 1 X 10 sq. mm earth wire	Rmt	20.00	310.00	6,200.00
	1.14.6	2 X 16 sq. mm + 1 X 16 sq. mm earth wire	Rmt	10.00	429.00	4,290.00
	1.14.7	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	Rmt	5,000.00	204.00	1,020,000.00
	1.14.8	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Rmt	4,000.00	268.00	1,072,000.00
	1.14.9	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Rmt	500.00	358.00	179,000.00
	1.14.10	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	Rmt	3,800.00	562.00	2,135,600.00
	1.14.11	4 X 16 sq. mm + 2 X 16 sq. mm earth wire	Rmt	1,200.00	789.00	946,800.00
1.9 b	1.17	Supply and drawing of following size FR PVC insulated copper conductor, single cosr cable in the existing surface / recessed steel / PVC conduit as required.				
	1.17.1	1 x 1.5 sq. mm	Rmt	10.00	20.00	200.00
	1.17.2	2 x 1.5 sq. mm	Rmt	10.00	33.50	335.00
	1.17.3	3 x 1.5 sq. mm	Rmt	10.00	50.00	500.00
	1.17.4	4 x 1.5 sq. mm	Rmt	10.00	63.50	635.00
	1.17.5	5 x 1.5 sq. mm	Rmt	10.00	80.00	800.00
	1.17.6	6 x 1.5 sq. mm	Rmt	5.00	93.50	467.50
	1.17.11	2 x 2.5 sq mm.	Rmt	5.00	49.50	247.50
	1.17.12	3 x 2.5 sq mm.	Rmt	5.00	74.50	372.50
	1.17.13	4 x 2.5 sq mm.	Rmt	5.00	96.50	482.50
	1.17.14	5 x 2.5 sq mm.	Rmt	5.00	121.00	605.00
	1.17.21	3 x 4 sq. mm	Rmt	5.00	108.00	540.00
	1.17.23	5 x 4 sq. mm	Rmt	5.00	173.00	865.00
	1.17.24	6 x 4 sq. mm	Rmt	5.00	205.00	1,025.00
	1.17.31	4 x 6 sq. mm	Rmt	5.00	195.00	975.00
	1.17.32	5 x 6 sq. mm	Rmt	5.00	240.00	1,200.00
a	1.17.33	6 x 6 sq. mm	Rmt	5.00	290.00	1,450.00
1.10	1.18	Supplying and drawing following pair, 0.5 sq.mm FR PVC insulated copper conductor, unarmoured telephone cable in the existing surface/ recessed steel PVC conduit as required.				
	1.18.1	1 Pair	Rmt	100.00	11.00	1,100.00
	1.18.2	2 Pair	Rmt	200.00	15.50	3,100.00
	1.18.3	4 Pair	Rmt	200.00	21.00	4,200.00
1.11	1.19	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface / recessed steel / PVC conduit as required.	Rmt	3,000.00	22.00	66,000.00
TOTAL OF COPPER WIRING IN PVC CONDUIT						14,117,170.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
2		STEEL / PVC CONDUIT, METAL BOXES				
2.1		Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
a	1.20.1	20 mm	Rmt	200.00	123.00	24,600.00
b	1.20.2	25 mm	Rmt	400.00	143.00	57,200.00
c	1.20.3	32 mm	Rmt	500.00	195.00	97,500.00
2.2	1.21	Supplying and fixing of following sizes of PVC conduit along with accessories In surface / recess including cutting the wall and making good the same in case of recessed conduit as required.				
a	1.21.1	20 mm	Rmt	26,600.00	56.50	1,502,900.00
b	1.21.2	25 mm	Rmt	13,300.00	64.50	857,850.00
c	1.21.3	32 mm	Rmt	1,210.00	80.50	97,405.00
d	1.21.4	40 mm	Rmt	10.00	106.00	1,060.00
e	1.21.5	50 mm	Rmt	10.00	135.00	1,350.00
2.3	1.22	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.				
a	1.22.1	75 mm X 75 mm X 60 mm deep	Each	2.00	72.00	144.00
b	1.22.2	100 mm X 100 mm X 60 mm deep	Each	2.00	86.50	173.00
c	1.22.4	150mm X 150 mm X 60 mm deep	Each	1.00	131.00	131.00
d	1.22.7	200 mm X 150 mm X 60 mm deep	Each	1.00	154.00	154.00
e	1.22.8	200 mm X 150 mm X 75 mm deep	Each	2.00	158.00	316.00
f	1.22.9	200 mm X 250 mm X 60 mm deep	Each	1.00	211.00	211.00
g	1.22.10	200 mm X 250 mm X 75 mm deep	Each	1.00	218.00	218.00
h	1.22.11	200 mm X 150 mm X 100 mm deep	Each	1.00	180.00	180.00
i	1.22.12	200 mm X 250 mm X 100 mm deep	Each	2.00	239.00	478.00
j	1.22.13	250 mm X 300 mm X 60mm dee	Each	2.00	259.00	518.00
k	1.22.14	200 mm X 300 mm X 100 mm deep	Each	2.00	267.00	534.00
l	1.22.15	250 mm X 300 mm X 60 mm deep	Each	2.00	286.00	572.00
m	1.22.16	250 mm X 300 mm X 100 mm deep	Each	2.00	310.00	620.00
2.4	1.24	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
a	1.24.1	5/6 amps switch	Each	1.00	75.00	75.00
b	1.24.2	2 way 5/6 amps switch	Each	1.00	98.50	98.50
c	1.24.3	15/16 amp switch	Each	1.00	109.00	109.00
d	1.24.4	3 pin 5/6 amp socket outlet	Each	1.00	96.00	96.00
e	1.24.5	6 pin 15/16 amp socket outlet	Each	1.00	147.00	147.00
f	1.24.6	Telephone socket outlet	Each	1.00	89.00	89.00
g	1.24.7	TV antenna socket outlet	Each	1.00	93.00	93.00
2.5	1.25	Supplying and fixing stepped type electronic fan regulator on the existing modular plate, switch box including connections but excluding modular plate etc. as required.	Each	30.00	322.00	9,660.00
2.6	1.26	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	100.00	22.00	2,200.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
2.7	1.27	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.				
a	1.27.1	1 or 2 Module (75mmX75mm)	Each	1.00	142.00	142.00
b	1.27.2	3 Module (100mmX75mm)	Each	1.00	154.00	154.00
c	1.27.3	4 Module (125mmX75mm)	Each	1.00	173.00	173.00
d	1.27.4	6 Module (200mmX75mm)	Each	1.00	221.00	221.00
e	1.27.5	8 Module (125mmX 125mm)	Each	1.00	255.00	255.00
f	1.27.6	12 Module (200mmX 150mm)	Each	1.00	344.00	344.00
2.8	1.28	Supplying and fixing follow'ing Modular base & cover plate on existing modular ITIetal boxes etc. as required.				
a	1.28.1	1or 2 Module	Each	50.00	63.00	3,150.00
b	1.28.2	3 Module	Each	20.00	75.00	1,500.00
c	1.28.3	4 Module	Each	1.00	81.50	81.50
d	1.28.4	6 Module	Each	1.00	98.50	98.50
e	1.28.5	8 Module	Each	1.00	121.00	121.00
f	1.28.6	12 Module	Each	1.00	162.00	162.00
2.9	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection, etc. as required. (For light plugs to be used in non residential building)	Each	1,450.00	288.00	417,600.00
2.10	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	370.00	366.00	135,420.00
2.11	1.36	Supplying and fixing stiff pendent with 300 mm long, 20 mm dia X 1.6 mm thick steel conduit, aluminium cast back plate and brass holder complete. including wiring the down rod with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and painting etc. as required.	Each	2.00	135.00	270.00
2.12	1.37	Supplying and fixing stiff pendent with 600 mm long, 20 mm dia X 1.6 mm thick steel conduit, aluminium cast back plate and brass holder complete, including wiring the down rod with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and painting etc. as required.	Each	30.00	167.00	5,010.00
2.13	1.38	Supplying and fixing call bell / buzzer suitable for single phase, 230 volts, complete as required.	Each	12.00	54.50	654.00
2.14	1.39	Providing and fixing 16/0.20 mm (0.50sqmm)twin flat flexible, FR PVC insulated, copper cable, in PVC sleeve of suitable size on the floor / wall, or side of the table / door etc. as required.	Rmt	500.00	19.00	9,500.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
2.15	1.40	Providing and fixing 16/0.20 mm (0.50sqmm), twin circulat flexible FR PVC insulated, PVC sheathed copper cable direct on the wall with with PVC clips etc. as required.	Rmt	1.00	17.50	17.50
2.16	1.41	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, 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.	Each	100.00	69.50	6,950.00
2.17	1.42	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, with all accessories and tube etc., including supplying and fixing ball and socket arrangement, 2 no. down rods of 20 mm dia X 1.6 mm thick steel conduit up to 30 cm length, painting and wiring the down rods and connection with 1.5 Sq mm FRPVC insulated, copper condutor, single core cable and earthing etc as required.	Each	10.00	195.00	1,950.00
2.18	1.43	Providing and fixing extra conduit down rod of 20 mm dia, 2X10 cm length wiring with 2 X 1.5 sq. mm FR PVC insulated, copper conductor, single core cable including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	300.00	28.50	8,550.00
2.19	1.44	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required.	Each	1.00	73.50	73.50
2.20	1.45	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc., as required.	Each	30.00	99.00	2,970.00
2.21	1.46	Installation, testing and commissioning of ceiling fan regulator, in existing switch box including connection with 1.5 sq.mm FR PVC insulated, copper conductor, single core cable, earthing the regulator etc. as required.	Each	1.00	41.00	41.00
2.22	1.47	Supplying and fixing extra down rod of 10 cm length G.I. pipe, 15 mm dia, heavy gauge including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	1.00	19.50	19.50

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
2.23	1.48	Supplying and fixing extra conduit down rod of 20 cm length G.I.pipe ,15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	1.00	23.00	23.00
2.24	1.49	Numbering of ceiling fan/ exhaust fan/ fluorescent fittings as required.	Each	1.00	19.50	19.50
2.25	1.50.1	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.	Each	20.00	163.00	3,260.00
2.26	1.50.2	Installation of exhaust fan upto 510 mm sweep in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.	Each	1.00	226.00	226.00
2.27	1.51	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	Each	20.00	68.50	1,370.00
2.28	1.52	Painting of ceiling fan in installed position with one or more coats of spray painting with synthetic enamel paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent etc as required.	Each	1.00	64.00	64.00
STEEL / PVC CONDUIT, METAL BOXES						3,257,071.50
3	MCB DISTRIBUTION BOARDS					
3.1	2.34	S/F Pre-wired SP MCB DB:				
		Supplying 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, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, including powder coat painting, earthing etc. as required. (But without MCB/RCCB/Isolator)				
	2.34.4	4 way double door	Each	1.00	2,526.00	2,526.00
	2.34.5	8 way double door	Each	1.00	3,192.00	3,192.00
	2.34.6	12 way double door	Each	1.00	4,100.00	4,100.00
3.2	2.6	Supplying and fixing following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar, common neutral link, earth bar, Din bar for mounting MCB's with provision of 100A TP 16kA MCCB as incommer , interconnection between, incomer MCCB and BUS bars. (but without MCB's / MCCB) as required.				
		Note: Vertical type MCB TPDB is normally used 3 phase outlets as required.				
	2.6.1	4 Way TP Double door	Each	1.00	4,770.00	4,770.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	2.6.2	8 Way TP Double door	Each	2.00	6,081.00	12,162.00
	2.6.3	12 Way TP Double door	Each	1.00	7,916.00	7,916.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		PRE-WIRED MCB DISTRIBUTION BOARDS				
3.3	2.7	Supplying and fixing following way, SP&N MCB distribution board of steel sheet for 240 volts, on surface/ recess, complete with loose wire box, terminal connectros for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor upto terminal block, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc., as required. (BUT without MCB / RCCB / Isolators.)				
	2.7.4	2 + 4 way, Double door	Each	1.00	2,152.00	2,152.00
	2.7.5	2 + 8 way, Double door	Each	1.00	2,572.00	2,572.00
	2.7.6	2 + 12 way, Double door	Each	1.00	3,108.00	3,108.00
3.4	2.8	Supplying and fixing following way prewired TP&N MCB distribution board of sheet steel for 415 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, detachable gland plate, interconnections, powder painted including earthing ets. as required (but with out MCB/RCCB/Isolator)				
	2.8.5	4 way (4 + 12), Double door	Each	69.00	6,345.00	437,805.00
	2.8.6	6 way (4 + 18). Double door	Each	32.00	8,197.00	262,304.00
	2.8.7	8 way (4 + 24), Double door	Each	5.00	8,984.00	44,920.00
	2.8.8	12 way (4 + 36), Double door	Each	3.00	11,042.00	33,126.00
3.5	2.9	Supplying and fixing following ways prewired vrtical type TP & N MCB distribution board of shteel sheet for 415 volts, on surface and recess complete with loss wire box of sheet steel dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar for mounting MCB's termianl connectors for all incoming and out going circuits duly prewired with adequete size of FR PVC insultaed copper conductor upto the terminal connector / neutral link,, earth bar etc., as required. (but without MCB's / RCCB / Isolator /MCCB)				
		Note: Vertical type MCB TPDB is normally used 3 phase outlets as required.				
	2.9.5	4 way Double door	Each	1.00	6,816.00	6,816.00
	2.9.6	6 way Double door	Each	1.00	8,810.00	8,810.00
	2.9.7	8 way Double door	Each	4.00	9,606.00	38,424.00
	2.9.8	12 way Double door	Each	4.00	12,762.00	51,048.00
3.6	2.10	Supplying and fixing 5 amps to 32 amps rating, 240 / 415 volts, 'C' Curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.10.1	Single pole	Each	1,600.00	141.00	225,600.00
	2.10.2	Single pole and neutral	Each	1.00	367.00	367.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	2.10.3	Double pole	Each	1.00	379.00	379.00
	2.10.4	Triple pole	Each	1.00	562.00	562.00
	2.10.5	Triple pole and neutral	Each	1.00	723.00	723.00
3.7	2.11	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	100.00	5.50	550.00
3.8	2.12	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.12.1	40 amps	Each	1.00	245.00	245.00
	2.12.2	63 amps	Each	1.00	303.00	303.00
3.9	2.13	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.13.2	63 amps	Each	45.00	563.00	25,335.00
	2.13.3	100 amps	Each	1.00	709.00	709.00
3.10	2.14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milli amperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.14.1	25 amps	Each	1.00	1,318.00	1,318.00
3.11	2.15	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.15.1	25 amps	Each	1.00	1,679.00	1,679.00
	2.15.2	40 amps	Each	30.00	1,703.00	51,090.00
	2.15.3	63 amps	Each	16.00	1,965.00	31,440.00
3.11A	2.2	Providing and fixing following rating and braking capacity MCCB in the existing cubicle panel board including drilling holes in cubicle panel, making connections etc., as required.				
	2.2.1	100 A MCCB 16 KA	Each	4.00	2,801.00	11,204.00
	2.2.2	125 A MCCB 16 KA	Each	1.00	3,914.00	3,914.00
	2.2.3	160 A MCCB 16 KA	Each	1.00	4,792.00	4,792.00
3.12		S/F 20A SPN MCB industrial socket outlet:				
	2.18	Supplying and fixing 20amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps 'C' curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out and complete with connections, testing and commissioning etc. as required.	Each	10.00	693.00	6,930.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
3.13		S/F 20A TPN MCB industrial socket outlet:				
	2.19	Supplying and fixing 20amps, 415volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 20 amps 'C' curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	Each	10.00	1,718.00	17,180.00
3.14		S/F 30A TPN MCB industrial socket outlet:				
	2.20	Supplying and fixing 30amps, 415volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 amps 'C' curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	Each	10.00	1,983.00	19,830.00
3.15		P/F M.V. danger notice plate:				
	2.21	Providing and fixing M.V. danger notice plate of 200mm X 150 mm. made of mild steel. at least 2 mm thick, and vitreous enamelled white on both sides, and with inscription in single red colour on front side as required.	Each	12.00	121.00	1,452.00
3.16		P/F H.V. danger notice plate:				
	2.22	Providing and fixing H.T. danger notice plate of 250mm X 200 mm, made of mild steel, at least 2 mm thick, and vitreous enamelled white on both sides, and with inscription in single red colour on front side as required.	Each	10.00	135.00	1,350.00
MCB & PRE-WIRED MCB DISTRIBUTION BOARDS						1,332,703.00
4		BUS TRUNKING AND OVER HEAD BUSBAR SYSTEM				
4.1	3.1	Supplying, installing on wall, testing and commissioning of following capacity rising mains with made of 1.6mm thick steel enclosure duly painted with powder coating, wall straps, fully PVC insulated 4nos aluminium busbars in convenient sections and suitable for 415volts, 3 phase, 4 wire, 50 Hz, A.C. supply with extension joints, fire proof barriers, expansion joints, thrust pads including jointing, and earthing with 2 runs of galvanised iron strips etc. as required. (Rising mains confirming to IS 8623, TEC 439)				
a	3.1.3	400 amps (SC rating for 1sec. - 25 KA)	Rmt	140.00	5,991.00	838,740.00
b	3.1.4	630 amps (SC rating for 1sec. - 45 KA)	Rmt	125.00	6,705.00	838,125.00
4.2	3.2	Supplying, installing, testing and commissioning of following capacity TPN tap off box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing rising mains and complete with TPN disconnecter FSU and HRC fuse, connections, earthing etc. as required.				
a	3.2.3	63 amps TPN	Each	1.00	6,640.00	6,640.00
b	3.2.4	100 amps TPN	Each	38.00	7,649.00	290,662.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
c	3.2.5	200 amps TPN	Each	1.00	12,012.00	12,012.00
4.3	3.4	Supplying, installing, testing and commissioning of following capacity End Feed Unit made of 1.6mm thick sheet steel enclosuer dully painted with powder to existing raising mains complete with TPN disconnecter FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.				
a	3.4.3	400 amps TPN	Each	2.00	17,152.00	34,304.00
b	3.4.4	600 amps TPN	Each	4.00	18,570.00	74,280.00
4.4	3.7	Supplying, installing, testing and commssioning of following capacity TPN tap of box /plug-in box made of 1.6mm thick sheet steel enclosure duly painted with powder coated on existing overhead bus bar system complete with TPN disconnecter FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.				
a	3.7.1	32 amps	Each	1.00	5,079.00	5,079.00
b	3.7.2	63 amps	Each	1.00	5,703.00	5,703.00
c	3.7.3	100 amps	Each	1.00	6,568.00	6,568.00
TOTAL OF BUS TRUNKING AND OVER HEAD BUSBAR SYSTEM						2,112,113.00
5		CABLE TRAYS				
5.1	4.1	Supplying, installing following size of perforated pre-painted M.S cable trays with perforation not more than 17.5%, in convenient section, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required.				
a	4.1.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	200.00	405.00	81,000.00
b	4.1.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	400.00	464.00	185,600.00
c	4.1.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	570.00	570.00
d	4.1.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	100.00	677.00	67,700.00
e	4.1.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	100.00	974.00	97,400.00
f	4.1.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	300.00	1,210.00	363,000.00
g	4.1.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1.00	1,475.00	1,475.00
5.2	4.2	Supplying, installing following size of perforated pre-painted M.S cable trays bends with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.2.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	12.00	678.00	8,136.00
b	4.2.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	8.00	790.00	6,320.00
c	4.2.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	989.00	989.00
d	4.2.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	12.00	1,197.00	14,364.00
e	4.2.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	1.00	1,751.00	1,751.00
f	4.2.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	8.00	2,196.00	17,568.00
g	4.2.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1.00	2,700.00	2,700.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
5.3	4.3	Supplying, installing following size of perforated pre-painted M.S cable trays reducers with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required.				
a	4.3.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	936.00	936.00
b	4.3.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	1,108.00	1,108.00
c	4.3.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	1,406.00	1,406.00
5.4	4.4	Supplying, installing following size of perforated pre-painted M.S cable trays Tee's with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.4.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	2.00	1,195.00	2,390.00
b	4.4.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	1,408.00	1,408.00
c	4.4.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	1,822.00	1,822.00
d	4.4.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	2.00	2,228.00	4,456.00
e	4.4.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	2.00	3,282.00	6,564.00
f	4.4.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	6.00	4,143.00	24,858.00
g	4.4.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1.00	5,088.00	5,088.00
5.5	4.5	Supplying, installing following size of perforated pre-painted M.S cable trays cross members with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.5.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	549.00	549.00
b	4.5.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	626.00	626.00
c	4.5.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	788.00	788.00
d	4.5.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	1.00	945.00	945.00
e	4.5.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	1.00	1,378.00	1,378.00
f	4.5.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	1.00	1,680.00	1,680.00
g	4.5.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1.00	2,103.00	2,103.00
CABLE TRAYS						906,678.00
6		EARTHING				
6.1	5.1	Earthing with G.I earth pipe 4.5 mtr long, 40 mm dia including accessones. and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) as required.	Set	1.00	2,537.00	2,537.00
6.2	5.2	Earthing with G.I. earth pipe 4.5mtrs long, 40mm dia including accessones, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal and salt as required.	Set	10.00	3,385.00	33,850.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
6.3	5.3	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessones, and providing masonary enclosure with cover plate having locking arrangement and watering pipe OF 2.7 Mtr long etc. (but without charcoal or coke and salt) as required.	Set	1.00	3,063.00	3,063.00
6.4	5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessones, and providing masonary enclosure with cover plate having locking arrangement and watering pipe OF 2.7 Mtr long etc. with charcoal or coke and salt as required.	Set	10.00	3,996.00	39,960.00
6.5	5.5	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessones, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) as required.	Set	1.00	7,627.00	7,627.00
6.6	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessones, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal or coke and salt) as required.	Set	8.00	8,559.00	68,472.00
6.7	5.7	Supplying and laying 6 SWG G.I. wire at 0.50 Rmt below ground level for conductor earth electrode, including connection / termination with GI thimble etc. as required.	Rmt	5.00	23.00	115.00
6.8	5.8	Supplying and laying 25 mm X 5 mm copper strip at 0.50 Rmt below ground as strip earth electrode, including connection / terminating with nut , bolt,spring ,washer etc. as required (jointing shall be done by overlapping and with 2 sets of brass nutbolt & spring washer spaced at 50mm).	Rmt	10.00	680.00	6,800.00
6.9	5.9	Supplying and laying 25 mm X 5 mm GI strip at 0.50 Rmt below ground as strip earth electrode, including connection / terminating with nut , bolt,spring ,washer etc. as required (jointing shall be done by overlapping and with 2 sets of GI nutbolt & spring washer spaced at 50mm).	Rmt	1,000.00	97.50	97,500.00
6.10	5.10	Providing and fixing 25mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut , bolt,spring , washer , excavation and re-filling etc. as required.	Rmt	200.00	962.00	192,400.00
6.11	5.11	Providing and fixing 25mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut , bolt,spring , washer , excavation and re-filling etc. as required.	Rmt	1.00	364.00	364.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
6.12	5.12	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with GI thimble excavation and re-filling as required.	Rmt	220.00	131.00	28,820.00
6.13	5.13	Providing and laying earth connection from earth electrode with 4.00mm dia Copper Wire in 15 mm dia G.I. pipe from earth electrode including connection with Copper thimble excavation and re-filling as required.	Rmt	1.00	186.00	186.00
6.14	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Rmt	200.00	766.00	153,200.00
6.15	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Rmt	300.00	120.00	36,000.00
6.16	5.16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Rmt	500.00	30.00	15,000.00
6.17	5.17	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Rmt	300.00	87.50	26,250.00
6.18	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or In recess for loop earthing along with existing surface/recessed conduit/submain wiring/cable as required.	Rmt	200.00	19.50	3,900.00
6.19	5.19	Providing and fixing 4.00mm dia copper wire on surface or in recess for loop earthing along with existing surface/recessed conduit/submain wiring/cable as required.	Rmt	300.00	77.00	23,100.00
6.20	5.20	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connections etc. as required.	Rmt	50.00	1,439.00	71,950.00
TOTAL OF EARTHING						811,094.00
7		LIGHTNING CONDUCTOR				
7.1	6.1	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, copper tube, having single prong at top, with 85 mm dia 3 mm thick copper base plate including holes etc. complete as required.	Each	4.00	701.00	2,804.00
7.2	6.2	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	Each	4.00	326.00	1,304.00
7.3	6.3	Fixing of lightning conductor finial(Single prong) with base plate including holes etc. complete as required.	Each	4.00	121.00	484.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
7.4	6.4	Joinitng copper / G.I. tape (with another copper / G I tape, base of the finial or any other metallic object) by riveting /nut bolting/sweating and slodering etc. as required.	Each	4.00	60.50	242.00
7.5	6.5	Providing and fixing copper tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Rmt	600.00	336.00	201,600.00
7.6	6.6	Providing and fixing copper tape 20mm X 3mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Rmt	1.00	359.00	359.00
7.7	6.7	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Rmt	600.00	58.00	34,800.00
7.8	6.8	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Rmt	550.00	81.50	44,825.00
7.9	6.9	Fixing of copper / G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Rmt	10.00	27.00	270.00
7.10	6.10	Fixing of copper / G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Rmt	1.00	55.50	55.50
7.11	6.11	Providing and fixing testing joint, made of 20mm X 3mm thick copper strip, 125 mm long, with 4 nos. of tinned brass bolts, nuts, check nuts and spring washers etc. complete as required.	Each	1.00	176.00	176.00
7.12	6.12	Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I. strip, 125mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	Each	4.00	58.50	234.00
7.13	6.13	Providing and laying copper tape 32 mm X 6 mm from earth electrode directly in ground as required.	Rmt	1.00	1,012.00	1,012.00
7.14	6.14	Providing and laying G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	Rmt	1.00	125.00	125.00
7.15	6.15	Laying copper / G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	Rmt	1.00	24.50	24.50
TOTAL OF LIGHTNING CONDUCTOR						288,315.00
8		MV CABLE LAYING				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
8.1	7.1	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
a	7.1.1	Upto 35 sq.mm	mtr	750.00	167.00	125,250.00
b	7.1.2	Above 35sq.mm and upto 95sq.mm	mtr	100.00	173.00	17,300.00
c	7.1.3	Above 95sq.mm and upto 185sq.mm	mtr	50.00	179.00	8,950.00
d	7.1.4	Above 185sq.mm and upto 400sq.mm	mtr	500.00	196.00	98,000.00
8.2	7.2	Laying of one number pve insulated and pve sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required				
a	7.2.1	Upto 35 sq.mm	mtr	100.00	115.00	11,500.00
b	7.2.2	Above 35sq.mm and upto 95sq.mm	mtr	100.00	121.00	12,100.00
c	7.2.3	Above 95sq.mm and upto 185sq.mm	mtr	50.00	127.00	6,350.00
d	7.2.4	Above 185sq.mm and upto 400sq.mm	mtr	200.00	144.00	28,800.00
8.3	7.3	Laying of one number pve insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc. as required, but excluding sand cushioning, protective covering.				
a	7.3.1	Upto 35 sq.mm	mtr	10.00	65.50	655.00
b	7.3.2	Above 35sq.mm and upto 95sq.mm	mtr	10.00	71.00	710.00
c	7.3.3	Above 95sq.mm and upto 185sq.mm	mtr	10.00	77.00	770.00
d	7.3.4	Above 185sq.mm and upto 400sq.mm	mtr	10.00	94.00	940.00
8.4	7.4	Laying of one number additional PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.				
a	7.4.1	Upto 35 sq.mm	mtr	5.00	41.50	207.50
b	7.4.2	Above 35sq.mm and upto 95sq.mm	mtr	5.00	47.00	235.00
c	7.4.3	Above 95sq.mm and upto 185sq.mm	mtr	5.00	53.00	265.00
d	7.4.4	Above 185sq.mm and upto 400sq.mm	mtr	5.00	70.00	350.00
8.5	7.5	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following in the existing RCC/HUME/ METAL/STONEWARE/ METAL pipe as required.				
a	7.5.1	Upto 35 sq.mm	mtr	50.00	12.00	600.00
b	7.5.2	Above 35sq.mm and upto 95sq.mm	mtr	10.00	18.50	185.00
c	7.5.3	Above 95sq.mm and upto 185sq.mm	mtr	10.00	25.00	250.00
d	7.5.4	Above 185sq.mm and upto 400sq.mm	mtr	100.00	44.00	4,400.00
8.6	7.6	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of followng size in the existing masonry open duct required.				
a	7.6.1	Upto 35 sq.mm	mtr	5.00	9.10	45.50
b	7.6.2	Above 35sq.mm and upto 95sq.mm	mtr	5.00	15.00	75.00
c	7.6.3	Above 95sq.mm and upto 185sq.mm	mtr	5.00	20.50	102.50

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
d	7.6.4	Above 185sq.mm and upto 400sq.mm	mtr	5.00	37.50	187.50
8.7	7.7	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
a	7.7.1	Upto 35 sq.mm (Clamped with 1mm thick saddle)	mtr	10.00	19.50	195.00
b	7.7.2	Above 35sq.mm and upto 95sq.mm (Clamped with 25x3mm MS Flat clamp)	mtr	10.00	60.00	600.00
c	7.7.3	Above 95sq.mm and upto 185sq.mm(Clamped with 25/40x3mm MS Flat clamp)	mtr	10.00	69.00	690.00
d	7.7.4	Above 185sq.mm and upto 400sq.mm (Clamped with 40x3mm MS Flat clamp)	mtr	10.00	95.00	950.00
8.8	7.8	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
a	7.8.1	Upto 35 sq.mm (Clamped with 1mm thick saddle)	mtr	6,600.00	16.50	108,900.00
b	7.8.2	Above 35sq.mm and upto 95sq.mm (Clamped with 25x3mm MS Flat clamp)	mtr	1,600.00	38.50	61,600.00
c	7.8.3	Above 95sq.mm and upto 185sq.mm(Clamped with 25/40x3mm MS Flat clamp)	mtr	1.00	47.50	47.50
d	7.8.4	Above 185sq.mm and upto 400sq.mm (Clamped with 40x3mm MS Flat clamp)	mtr	3,000.00	72.50	217,500.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
8.9	7.9	Supply and making cable route marker with cement concrete 1:2:4(1 cement:2 coarse sand:4 graded stone aggregate 20mm nominal size) of size 60cm x 60cm at the bottom and 50 cm at the top with a thickness of 10cm including inscription duly engraved as required	Each	10.00	255.00	2,550.00
8.10	7.10	Supply and fixing cable route marker with 10cm x 10cm x 5 mm thick G.I. plate with inscription there on, bolted / welded to 35mm x 35mm x 6mm angle iron, 60cm long and fixing the same in ground as required.	Each	20.00	244.00	4,880.00
TOTAL OF MV CABLE LAYING						716,140.50
7		MV CABLE JOINTING AND END TERMINATION				
7.1	9.1	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
a	9.1.20	3.5 X 25 sq. mm (28mm)	Each	2.00	191.00	382.00
b	9.1.21	3.5 X 35 sq. mm (32mm)	Each	2.00	223.00	446.00
c	9.1.22	3.5 X 50 sq. mm (35mm)	Each	2.00	262.00	524.00
d	9.1.23	3.5 X 70 sq. mm (38mm)	Each	90.00	297.00	26,730.00
e	9.1.24	3.5 X 95 sq. mm (45mm)	Each	2.00	366.00	732.00
f	9.1.25	3.5X120 sq.mm (45mm)	Each	2.00	383.00	766.00
g	9.1.26	3.5 X 150 sq. mm (50mm)	Each	2.00	458.00	916.00
h	9.1.27	3.5X185 sq.mm (57mm)	Each	2.00	616.00	1,232.00
i	9.1.28	3.5 X 225 sq. mm (62mm)	Each	2.00	747.00	1,494.00
j	9.1.29	3.5 X 240 sq. mm (62mm)	Each	26.00	771.00	20,046.00
k	9.1.30	3.5 X 300 sq. mm (70mm)	Each	2.00	867.00	1,734.00
l	9.1.31	3.5 X 400 sq. mm (82mm)	Each	44.00	1,109.00	48,796.00
m	9.1.32	4 X 10 sq. mm (25mm)	Each	20.00	146.00	2,920.00
n	9.1.33	4 X 16 sq. mm (28mm)	Each	70.00	188.00	13,160.00
o	9.1.34	4 X 25 sq. mm (28mm)	Each	16.00	192.00	3,072.00
p	9.1.35	4 X 35 sq. mm (32mm)	Each	12.00	224.00	2,688.00
q	9.1.36	4 X 50 sq. mm (35mm)	Each	2.00	265.00	530.00
TOTAL OF MV CABLE JOINTING AND END TERMINATION						126,168.00
TOTAL OF ELECTRICAL WORKS BOQ FOR DSR ITEMS						23,667,453.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
10		ELECTRICAL WORKS BOQ FOR NON DSR ITEMS				
I	I	LIGHTING FIXTURES				
		Supply, delivery, assemble, installation and testing of following types of incandescent / CFL fitting on wall/ ceiling/ column of building including supply of suitable wattage CFL lamps, complete fitting and making connection from the suitable point outlet complete as required and as per the direction of Engineer-in-charge.				
1	NS1	9 W CFL Bulk Head (WKP 14109) (1 X 9 W CFL(TC-S)) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	150.00	953.79	143,068.05
2	NS2	2 x 18 Watt CFL surface Mounted light Fixture (Round type) (FWP 41218) (2 x 18 W CFL (TC-D)) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	20.00	4,287.15	85,743.08
3	NS3	2 x 18W Surface mounted fixtures with CFL lamps (WVP 41218) 2 x 18 W CFL (TC-L) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	30.00	1,632.38	48,971.37
		Supply, delivery, installation and testing of following types of fluorescent tube fixtures directly on wall / ceiling of building with all accessories such as electronics ballast, lamps, stove enamelled box, perspex sheet cover etc complete assembly including supply & fixing of teak wood round block and making connection from the suitable point outlet as per the direction of Engineer-in-charge.				
4	NS4	1 x 14 W FTL mirror light fixture (Philips Victor 14 W TCH 207 1 x TL5- 14) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	1.00	707.47	707.47
5	NS5	1 X 28 W FTL (T5) wall / surface mounted light Fixture (WRF 80128 SG) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	200.00	1,070.14	214,028.80
		Supply, delivery, installation and testing of following types of recess mounted compact fluorescent tube light type luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required nos. fluorescent tube,(Truelite)etc complete as required as per the direction of Engineer-in-charge.				
6	NS6	4X14W FTL (T5) recess mounted indirect - direct luminaire with high efficiency transluence (HET) technology, suitable for FTL (T5) lamps (2' x 2' fixture) (WVF 53414 SGW) 4 x 14 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	850.00	5,806.05	4,935,143.35

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	NS7	4X14W FTL (T5) recess mounted indirect - direct luminaire with heigh efficiency transluence (HET) technology, suitable for FTL (T5) lamps (2' x 2' fixture) (WVF 78414 SGA) 4 x 14 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	1.00	5,963.37	5,963.37
8	NS8	2X18 W CFL recess mounted down light Fixtures (WCP 39218) 2 x 18 W CFL (TC-D) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	135.00	1,678.26	226,565.64
9	NS9	1X18 W CFL recess mounted down light Fixtures (WCP 36118 SGW) 1 x 18 W CFL (TC- DE) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	150.00	1,788.66	268,299.60
10	NS10	Supply, delivery, installation, testing & commissioing of 1X35/70W CDMT Track mounted light Fixture with wide beam reflector , with all accessories as per standard item ballasts, including required nos. lamps (WIPRO GTH 41070 W OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	1.00	9,150.85	9,150.85
11	NS11	Supply, delivery, installation & testing of XTS 4100 Track with all accessories as per standard item track & track accessories like power feed, end cap, suspension, straight connector including fixing of track. (Rate for only 1mtr. Tack)	RMT	175.00	2,083.55	364,620.73
12	NS12	Supply, delivery, installation & testing of 1X250W MH intigral type Highbay light Fixture , with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required nos. lamps OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	60.00	7,135.04	428,102.22
13	NS13	Supply and Fixing of Aviation Yellow painted die - cast AL alloy housing, red coloured polycarbonate domeLight Fixture (GLS 2 X 100W ES) Bajaj 020115 (BJAOL 2 ES) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	2.00	4,815.83	9,631.66
14	NS14	Supply and Fixing of 1X26W die cast aluminium Bollard with UV stabilized polycarbonate diffuser suitable for CFL lamps Wipro (FBP 32126) 1 X 26 W CFL (TC-D) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	90.00	3,963.96	356,756.22
15	NS15	Supply and Fixing of 1X50W halogen PAR 20 symmetrical bush light with housing in die cast aluminium with clear toughened glass suitable for PAR 20 lamps. Wipro (FFQ 51050, FFX 511, 512) 1 X 50 Halogen PAR 20 OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	25.00	2,651.12	66,277.95

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
16	NS16	Supply and Fixing of 1X150W IP 65 Integral flood light with symmetric wide beam reflector. Wipro (WFH 51150) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	20.00	5,951.57	119,031.44
17	NS17	Supply and Fixing of 1X400W IP 65 Integral flood light with symmetric wide beam reflector. Wipro (WFH 52400) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	10.00	8,398.27	83,982.66
18	NS18	Supply and Fixing of 2.2 W 230V IP 65 Integral LED step light Wipro (LT54-002-XXX-RD-XX) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	90.00	3,100.02	279,001.85
19	NS19	Supply and Fixing of 3 X 1 W 12V IP 67 Integral LED inground light with Transformer 240V/12V. Wipro (LI10-003-045-RD-XX*) (LG12-010) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	40.00	6,610.22	264,408.92
20	NS20	Supply and Fixing of 1 X 70 W HIT-CE wall mounted up-down light in die cast aluminium housing with clear toughened glass suitable for HIT-CE lamps. Wipro (UWH 11070B) 1 X 70 W HIT-CE OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	25.00	15,415.54	385,388.58
21	NS21	Supply and Fixing of 1X150W HPSV (T) IP 66 die cast aluminium top maintainable Street Light with covered toughened glass & pot optics reflector with an IP 54 control gear box compartment. (WST 71150) 1X150 W HPSV (T) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	50.00	7,927.04	396,352.10
22	NS22	Supply and Fixing of 2X36 W FTL surface mounted mirror optics light Fixture (WCF 82236) 2X 36 W FTL (T8) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	75.00	3,107.69	233,076.83
23	NS23	Supply and Fixing of 1X28 W FTL recess mounted mirror optics light Fixture WVF 58128 SGW (1 X 28 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	475.00	2,997.31	1,423,724.15
24	NS24	Supply and Fixing of 1X28 W FTL surface / suspension mounted contour light with FTL lamps for continuous band of light fixture (GCF 32128 SGW CT) 1 X 28 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make. (Trip light)	Nos	1,400.00	5,652.09	7,912,924.60

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
25	NS25	Supply and Fixing of 1X54 W FTL surface / suspension mounted contour light with FTL lamps for continuous band of light fixture (GCF 32154 SGA CT) 1 X 54 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make. (strip light)	Nos	500.00	6,396.37	3,198,184.50

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		LED LIGHTING FIXTURES CONSIDERED FOR SOLAR				
		Supply, delivery, installation and testing of following types of recess mounted LED light type luminaires with all accessories.				
26	NS26	1X25W the next generation recess mounted LED light luminaires for new age workspace WIPRO LM11-025-XXX-WH-XX (25 X 1 W) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	125.00	13,403.09	1,675,386.13
27	NS27	3X6 W recess mounted LED light luminaire Wipro LD41-018-XXX-WH-XX(3 X 6 W LED) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	300.00	7,773.98	2,332,194.83
28	NS28	1X6 W recess mounted LED light luminaire Wipro LD45-006-XXX-WH-XX (1 X 6 W LED diffuser) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	90.00	3,496.85	314,716.07
II	II	Additional Light Fixture				
29	NS29	1X36 W FTL surface/Recess mounted mirror optics light Fixture (WCF 81236) 1X 36 W FTL (T8) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	275.00	2,849.63	783,648.53
30	NS30	1X11 W FTL Wall mounted Mirror Light Fixture (WRP 21111) 1X 11 W CFL(TC-S) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	35.00	859.44	30,080.44
31	NS31	1X28 W FTL surface mounted mirror optics light Fixture (WIF 20228) 1X 28 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	15.00	2,144.22	32,163.32
32	NS32	1X28 W FTL surface mounted patti light Fixture (WDF 9128) 1X 28 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	150.00	1,134.75	170,212.65
33	NS33	Supply, delivery, installation, testing & commissioning of 1X35W CDMT Track mounted light Fixture with wide beam reflector , with all accessories as per standard item ballasts, including required nos. lamps (WIPRO GTH 41035 W OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	275.00	9,150.85	2,516,483.75
34	NS 34	Supply, storing, handling, assembling fixing in position, testing and commissioning of occupancy sensor, with ingress protection of IP 55, complete with all fixing accessories as required (equivalent to COP 12010 of Wipro)	Nos	35.00	7,050.00	246,750.00
35	NS35	Supply and erection of Octagonal GI Hotdip street light pole of 9Mtrs long suitable for 150W HPSV Street light light fixture along with control box consists of connectors, MCB and Wiring inside the length of the pole , Erection cost excluding the civil works.	Nos	50.00	26,607.64	1,330,382.10

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		TOTAL OF LIGHT FIXTURES AND POLES AS PER NON DSR				30,891,123.77

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
III	III	SUPPLY OF FANS AND EXHAUST FANS				
36	NS36	Supply, delivery, installation and testing of following sweeps of a.c. ceiling fan as per the specification of DGS &D complete with fan blades, down rod, canopies, capacitor etc including supply of sundry materials, making connection from the suitable point outlet but excluding cost of fan regulator complete as required				
		1400 mm sweep	Nos	100.00	1,918.73	191,872.90
37	NS37	Supply, delivery, installation and testing of following sweeps of a.c. Energy efficient ceiling fan (60 W) as per the specification of DGS &D complete with fan blades, down rod, canopies, capacitor etc including supply of sundry materials, making connection from the suitable point outlet but excluding cost of fan regulator complete as required and as per the direction of Engineer-in-charge.				
		1400 mm sweep	Nos	1.00	1,781.07	1,781.07
38	NS38	Supply, delivery, installation & testing of following sweeps and speed of exhaust fans suitable for operation at 1 phase, 250 volt, 50 Hz, a.c. supply complete with a set of propeller blade, tripod leg for mounting of motor, ring frame, blades, gravity louvre complete assembly including supply of sundry materials, making hole of suitable size for housing of exhaust fan, making connection from suitable point outlet, making good the damages caused complete as required and as per direction of Engineer-in-charge.				
		300 mm sweep 900 rpm	Nos	20.00	1,413.99	28,279.88
39	NS39	Supply, delivery, installation & testing of 400-mm sweep wall mounted type bracket fans suitable for operation at 250 volt, 50 Hz, a.c. supply complete assembly including oscillating arrangement, supply of sundry materials, making connection from suitable point outlet, making good the damages caused complete as required and as per direction of Engineer-in-charge.				
			Nos	1.00	1,690.00	1,690.00
TOTAL OF FANS AS PER NON DSR						223,623.85

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
IV	IV	LT PANELS				
40	NS40	Design and Supplying of following L.T. Panels manufactured out of 16SWG CRCA. sheet, totally vermin and dust proof duly painted complete with bus bars, neutral links, earth strips, cable alleys etc as required and as per detailed specs with following components & generally to accordance to spec. The panel shall be expandable for future expansion.				
a	A	Main PCC Panel	SET	1.00	1,245,434.26	1,245,434.26
	1.1.	<u>INCOMER</u>				
	(i)	1 Set of 1250A. 415 Volts Electrically Control 4P EDO type A.C.B. of 65 kA with MP based overload, O/V, O/C, S/C and EF protection. With 1 Set of Digital multi function meter with 1250/5A CTs, CT shorting links RYB LED indicating lamps and 2A control SP MCBs.				
	(ii)	1 Set of 1250A. 415 Volts Electrically Control 4P EDO type A.C.B. of 65 kA with MP based overload, O/V, O/C, S/C and EF protection. With 1 Set of Digital multi function meter with 1250/5A CTs, CT shorting links RYB LED indicating lamps and 2A control SP MCBs.				
	1.2.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-1250A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets of phase indication lights LED type with protection MCB.				
	1.3.	<u>MAIN BUS BARS</u>				
		1400A 3 phase 4 wire 415 volts 50 Hz aluminium bus bars with colour coded PVC heat shrinkable sleeves (Bidders to submit Bus Bar sizing with fault level calculation)				
		Note: Interlocking between two incomers and bus coupler shall be provided				
	1.4.	<u>BUS COUPLER</u>				
		1 Set of 1250A. 415 Volts Electrically Control 4P EDO type A.C.B. of 65 kA				
	1.5.	<u>OUTGOING</u>				
	i)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For APFC Panel - 1st Feeder.)				
	ii)	1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 2nd Feeder.)				
	iii)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 3rd Feeder.)				
	iv)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For UPS output Panel -4th Feeder.)				
	v)	1 No 800A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PCC - 2 Panel -5th Feeder.)				
	vi)	1 No 100A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PHE Panel -6th Feeder.)				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	vii)	2 Nos 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Lift Panel - 1 & 2 -7th & 8th Feeder.)				
	viii)	1 No 63A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Spare Feeder.)				
	ix)	1 No 125A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Spare Feeder.)				
	x)	1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source KWH & Ammeter with Selector Switch (For Raising Main - 2 - 11th Feeder.)				
	xi)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source KWH & Ammeter with Selector Switch (For Raising Main - 4- 12th Feeder.)				
	xii)	2 Nos 125A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Spare Feeder.)				
	xiii)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Lift Panel - 3 -15th Feeder.)				
	xiv)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For UPS output Panel - 16th Feeder.)				
	xv)	1 No 800A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PCC - 2 Panel -17th Feeder.)				
	xvi)	1 No 315A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Fire Fighting Panel -18th Feeder.)				
	xvii)	1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PCC - 1 Panel -19th Feeder.)				
	xviii)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Lift Panel - 4 -20th Feeder.)				
	xix)	1 No 63A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For External Lighting DB - 1 -21th Feeder.)				
b	B	Power Control Centre PCC - 1	SET	1.00	294,383.91	294,383.91
	1.1.	<u>INCOMER</u>				
		1 No 400A TPN MCCB of 36 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 400/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
	1.2.	<u>BUS BARS</u>				
		400A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	1 Set of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	1 Set of 0-400A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	3 Nos phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB 1 (BF) - 1st Feeder).				
	ii)	1 No 63A TPN MCCB of 25 kA (AHU 1 (BF) - 2nd Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (AHU 2 (BF) - 3rd Feeder).				
	iv)	1 No 63A TPN MCCB of 25 kA (PDB 1 (BF) - 7th Feeder).				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	v)	1 No 63A TPN MCCB of 25 kA (PDB 2 (BF) - 8th Feeder).				
	vi)	1 No 63A TPN MCCB of 25 kA (AUDITORIUM PDB - 10th Feeder).				
	vii)	1 No 63A TPN MCCB of 25 kA (AUDITORIUM STAGE LIGHT PODIUM - 11th Feeder).				
	viii)	1 No 63A TPN MCCB of 25 kA (TOILET EXHUAUST FAN 01 - 12th Feeder).				
	ix)	1 No 63A TPN MCCB of 25 kA (TOILET EXHUAUST FAN 02 - 13th Feeder).				
	x)	1 No 63A TPN MCCB of 25 kA (UPS - 16th Feeder).				
	xi)	1 No 63A TPN MCCB of 25 kA (EXTERNAL LIGHTING DB - 17th Feeder).				
	xii)	3 Nos 63A TPN MCCB of 25 kA (Spare).				
	xiii)	1 No 40A TPN MCCB of 25 kA (LDB 1 BF - 5th Feeder).				
	xiv)	1 No 40A TPN MCCB of 25 kA (LDB 2 BF - 6th Feeder).				
	xv)	1 No 40A TPN MCCB of 25 kA (AUDITORIUM LDB -9th Feeder).				
c	C	Power Control Centre PCC - 2	SET	1.00	693,433.29	693,433.29
	1.1.	<u>INCOMER</u>				
		2 Nos 800A 4P Motorised MCCB of 36 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 800/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
	1.2.	<u>BUS BARS</u>				
		800A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>BUS COUPLER</u>				
		1 No 800A 4P Motorised MCCB of 36 kA				
		Note: Interlocking between two incomers and bus coupler shall be provided				
	1.4.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-800A (96 sq.mm) Ammeter with ASS & CT's.				
	iii)	2 Sets of phase indication lights LED type with protection MCB.				
	1.5.	<u>OUTGOINGS</u>				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB LGF - 1st Feeder).				
	ii)	1 No 100A TPN MCCB of 25 kA (AHU 3 LGF - 2nd Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (AHU 4 - 3rd Feeder).				
	iv)	1 No 40A TPN MCCB of 25 kA (LDB 1 LGF - 4th Feeder).				
	v)	1 No 63A TPN MCCB of 25 kA (LDB 2 LGF - 5th Feeder).				
	vi)	1 No 63A TPN MCCB of 25 kA (PDB 1 LGF - 6th Feeder).				
	vii)	1 No 63A TPN MCCB of 25 kA (PDB 2 LGF - 7th Feeder).				
	viii)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source KWH & Ammeter with Selector Switch (For Raising Main - 5 8th Feeder.)				
	ix)	1 No 80A TPN MCCB of 25 kA (LIFT -5) -9th Feeder).				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	x)	1 No 80A TPN MCCB of 25 kA (LIFT -6) -10th Feeder).				
	xi)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 6 11th Feeder.)				
	xii)	2 Nos 80A TPN MCCB of 25 kA (Spare).				
	xiii)	1 No 63A TPN MCCB of 25 kA (UPS -1 14th Feeder).				
	xiv)	1 No 100A TPN MCCB of 25 kA (UPS - 2 15th Feeder).				
	xv)	1 No 63A TPN MCCB of 25 kA (UPS - 3 16th Feeder).				
	xvi)	1 No 40A TPN MCCB of 25 kA (UPS -4 SIXTH FLOOR - 17th Feeder).				
	xvii)	1 No 63A TPN MCCB of 25 kA (EXTERNAL LIGHTING DB 3 - 18th Feeder).				
	xviii)	3 Nos of 160A TPN MCCB of 25 kA Secondary Pumps 1,2 & 3).				
	xix)	1 No 63A TPN MCCB of 25 kA (Spare).				
d	D	Floor Distribution Panel as per Schematic TYPE - 1 (7 Nos)	SET	7.00	120,023.21	840,162.50
	1.1.	<u>INCOMER</u>				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	<u>BUS BARS</u>				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT's.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB - 3rd Feeder).				
	ii)	1 No 63A TPN MCCB of 25 kA (LDB - 1st Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (PDB - 2nd Feeder).				
	iv)	1 No 63A TPN MCCB of 25 kA (Spare).				
	v)	1 No 40A TPN MCCB of 25 kA (Spare).				
e	E	Floor Distribution Panel as per Schematic TYPE - 2 (5 Nos)	SET	5.00	185,573.48	927,867.39
	1.1.	<u>INCOMER</u>				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	<u>BUS BARS</u>				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	OUTGOINGS				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB 1 - 7th Feeder).				
	ii)	1 No 63A TPN MCCB of 25 kA (ACDB 2 - 8th Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (ACDB 3 - 9th Feeder).				
	iv)	2 No 63A TPN MCCB of 25 kA (Spare).				
	v)	1 No 32A TPN MCCB of 25 kA (LDB 1 -1st Feeder).				
	vi)	1 No 32A TPN MCCB of 25 kA (LDB 2 -2nd Feeder).				
	vii)	1 No 32A TPN MCCB of 25 kA (LDB 3 -3rd Feeder).				
	viii)	1 No 32A TPN MCCB of 25 kA (PDB 1 -4th Feeder).				
	ix)	1 No 32A TPN MCCB of 25 kA (PDB 2 -5th Feeder).				
	x)	1 No 32A TPN MCCB of 25 kA (PDB 3 -6th Feeder).				
f	F	Floor Distribution Panel as per Schematic TYPE -3 (4 Nos)	SET	4.00	129,223.82	516,895.28
	1.1.	INCOMER				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	BUS BARS				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	METERING				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	OUTGOINGS				
	i)	1 No 80A TPN MCB of 25 kA (PDB 1 - 3rd Feeder).				
	ii)	1 No 80A TPN MCB of 25 kA (AHU 5 - 4th Feeder).				
	iii)	1 No 63A TPN MCB of 25 kA (LDB 1 - 1st Feeder).				
	iv)	1 No 63A TPN MCB of 25 kA (LDB 2 - 2nd Feeder).				
	v)	1 No 63A TPN MCB of 25 kA (Spare).				
	vi)	1 No 32A TPN MCCB of 25 kA (AHU 4- 5th Feeder).				
g	G	Floor Distribution Panel as per Schematic TYPE - 4 (3 Nos)	SET	3.00	129,223.82	387,671.46
	1.1.	INCOMER				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	BUS BARS				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	METERING				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	OUTGOINGS				
	i)	1 No 80A TPN MCCB of 25 kA (ACDB 1 - 3rd Feeder).				
	ii)	1 No 80A TPN MCCB of 25 kA (ACDB 5 - 4th Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (LDB 1 - 1st Feeder).				
	iv)	1 No 63A TPN MCCB of 25 kA (PDB 1 - 2nd Feeder).				
	v)	1 No 63A TPN MCCB of 25 kA (Spare).				
	vi)	1 No 32A TPN MCCB of 25 kA (Spare).				
h	H	UPS out put Distribution Panel	SET	1.00	156,539.30	156,539.30
	1.1.	INCOMER				
		2 Nos 80A TPN MCCB of 25 kA with overload, O/V and O/C protection. & 2 Sets of Kilo Watt Hour meter with 80/5A CTs, CT shorting links RYB LED indicating lamps and 4A control TP MCBs.				
	1.2.	BUS BARS				
		160A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	METERING				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-80A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	OUTGOINGS				
	i)	1 No 40A TPN MCB (UDB 7th Floor- 1 Feeder).				
	ii)	1 No 40A TPN MCB (UDB 8th Floor - 2 Feeder).				
	iii)	1 No 40A TPN MCB (UDB 9th Floor - 3 Feeder).				
	iv)	1 No 40A TPN MCB (UDB 10th Floor - 4 Feeder).				
	v)	1 No 40A TPN MCB (UDB 11th Floor - 5 Feeder).				
	vi)	1 No 40A TPN MCB (UDB 12th Floor - 6 Feeder).				
	vii)	1 No 40A TPN MCB (UDB 13th Floor -7 Feeder).				
	viii)	2 Nos 40A TPN MCB (Spare).				
i	I	Raising Main I/C Feeder - 01 & 02	SET	2.00	61,089.28	122,178.56
		1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection with 1 Sets phase indication lights LED type with protection MCB.				
j	J	Raising Main I/C Feeder - 03 & 04	SET	2.00	61,089.28	122,178.56
		1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection with 1 Sets phase indication lights LED type with protection MCB.				
k	K	Raising Main I/C Feeder - 05 & 06	SET	2.00	61,089.28	122,178.56
		1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection with 1 Sets phase indication lights LED type with protection MCB.				
l	L	300 kVAR APFC Panel	SET	1.00	931,639.48	931,639.48
	1.1.	INCOMER				
		1 Set of 630A. 415 Volts Electrically Control 4P MDO type A.C.B. of 50 kA with overload, O/V, O/C and S/C protection. With 1 Set of Digital multi function meter with 630/5A CTs,CT shorting links RYB LED indicating lamps and 2A control SP MCBs				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
	1.2.	BUS BARS				
		800A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	METERING & CONTACTORS				
		1 set of 12 stage automatic (Electronic) correction relay with PF meter along with 630/5A C.T.S. for 300kVar Capacitor Panel				
		1 No. Auto / manual selector switch with auto / manual 'ON' indication.				
		1 set of control contactors / timer / back up HRC fuses for the required interlocking / operation.				
	1.4.	OUTGOING				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		12 Nos. outgoing feeders each comprising of,				
		1 Set of ON / OFF indicating light				
		1 Set of start / stop push button				
		1 No. Auto by-pass selector.				
	i)	2 Sets of 5 kVAr capacitor bank with 63A TPN MCCB and 63A contactors with capacitor duty.				
	ii)	1 Sets of 10 kVAr capacitor bank with 80A TPN MCCB and 80A contactors with capacitor duty.				
	iii)	2 Sets of 15 kVAr capacitor bank with 100A TPN MCCB and 100A contactors with capacitor duty.				
	iv)	2 Sets of 25 kVAr capacitor bank with 125A TPN MCCB and 125A contactors with capacitor duty.				
	v)	4 Sets of 50 kVAr capacitor bank with 160A, TPN MCCB and 160A contactors with capacitor duty.				
	vi)	1 Set of without capacitor bank with 100A TPN MCCB and 100A contactors with capacitor duty with space provision for capacitors.				
		TOTAL OF PANELS AS PER NON DSR				6,360,562.54
V	V	CABLES & OTHER ELECTRICAL WORKS				
41	NS41	Supply, Commissioning of power cables of 1100V grade XLPE aluminium or copper armoured cable as per specification.				
a	a	3.5 Core x 400 sq.mm. AL AYFY				
		SUPPLY	Rmt	1,400.00	1,502.94	2,104,111.08
b	b	3.5 Core x 240 sq.mm. AL AYFY				
		SUPPLY	Rmt	1,600.00	966.68	1,546,691.58
c	c	3.5 Core x 185 sq.mm AL AYFY				
		SUPPLY	Rmt	50.00	763.17	38,158.51
d	d	3.5 Core x 150 sq.mm AL AYFY				
		SUPPLY	Rmt	50.00	626.82	31,340.86
e	e	3.5 Core x 120 sq.mm AL AYFY				
		SUPPLY	Rmt	50.00	529.13	26,456.57
f	f	4 Core x 70 sq.mm AL AYFY				
		SUPPLY	Rmt	1,600.00	367.34	587,742.80
g	g	4 Core x 50 sq.mm AL AYFY				
		SUPPLY	Rmt	50.00	275.76	13,787.94
h	h	4 Core x 35 sq.mm AL AYFY				
		SUPPLY	Rmt	900.00	214.71	193,234.69
i	i	4 Core x 25 sq.mm AL AYFY				
		SUPPLY	Rmt	350.00	169.93	59,476.40
j	j	4 Core x 16 sq.mm AL AYFY				
		SUPPLY	Rmt	1,100.00	132.28	145,511.12
k	k	4 Core x 10 sq.mm AL AYFY				
		SUPPLY	Rmt	20.00	119.05	2,381.09
l	l	4 Core x 6 sq.mm AL AYFY				
		SUPPLY	Rmt	20.00	98.70	1,974.07
m	m	1 Core x 95 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	10.00	945.31	9,453.13
n	n	1 Core x 50 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	10.00	495.55	4,955.52
o	o	1 Core x 35 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	200.00	361.23	72,246.78
p	p	1 Core x 25 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	20.00	261.51	5,230.26
q	q	1 Core x 16 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	3,500.00	169.93	594,763.97
r	r	1 Core x 10 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	1,500.00	125.16	187,739.87

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
s	s	3 Core x 2.5 sq.mm CU YWY				
		SUPPLY	Rmt	220.00	117.87	25,931.56
t	t	4 Core x 4 sq.mm CU YWY				
		SUPPLY	Rmt	110.00	215.72	23,729.51
42	NS42	Supply and Laying of CAT - 6 Data cable in existing conduits	Rmt	60,000.00	21.95	1,316,934.00
43	NS43	Supply and fixing of information out let points with 2 module box, along with 2 DATA outlet & 1 numbers voice and one space closure outlet plate with RJ 45 & RJ 11 socket out let of AMP or equivalent makes.	SET	400.00	993.91	397,564.20
44	NS44	Supply and fixing of information outlet points with 2 module box, along with 1 DATA outlet and 1 numbers voice outlet plate with RJ 45 & RJ 11 socket out let of AMP or equivalent makes.	SET	100.00	554.17	55,417.35
45	NS45	Supplying and fixing 5 amps to 32 amps rating, 240 / 415 volts, 'D' Curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
		Single pole	Each	198.00	210.00	41,580.00
46	NS46	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	a	40 amps	Each	1.00	950.00	950.00
b	b	63 amps	Each	45.00	1,100.00	49,500.00
c	c	100 amps	Each	1.00	1,350.00	1,350.00
TOTAL OF CABLES AND OTHER ELECTRICAL WORKS AS PER NON DSR						7,538,212.84
VI	VI	Generation-3 Lightening system(for Satelit 3 60)				
47	NS 47	Supply, erection, installation, testing and commissioning of Generation-3, Duval Messien -Satelit 3 60 with 5.0 mtr Mast radius of protection for Level 1 = 79 mtrs, Level 2 = 97 mtrs, Level 3 = 107 mtrs, Lightning Protection system based on proactive ESE techonology. No external power source required to operate in all weather conditions, in an Industrial environment. The device & its installation, including earthing system should confirm to NFC 17-102, with appropriate mounting arrangement, including the necessary mounting mast should be provided .The above system should have the desired level & radius of protection. The ESE system should be tested by a reputed testing agency (C.P.R.I)	Set	2.00	280,000.00	560,000.00
48	NS 48	Supply, erection, installation, testing and commissioning of 5.0 meter mast made of G.I Class B of reputed make gavelnising with arrangements to withstand wind velocity as per drawing enclosed.	Set	2.00	19,500.00	39,000.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
49	NS 49	Supply, installation, testing & commissioning of 25 x 6 mm GI / 25 x 3 Cu down conductor for connecting the air terminal system to the earthing network inclusive of down conductor tape clip, at every 0.5 mtr, Oblong test clamp, DC square clamp and necessary looping connections at right angle bends & providing pvc sheath for D.C at the height of 2 mtrs from ground level, mounting & fixing of lightning counter at the height of 2.0 mtrs from the ground level.	RM	200.00	985.00	197,000.00
50	NS 50	Supply, installation, commissioning & testing of Lightning counter for counting number of lightning strike. The counter should work without any external power supply and to be tested by a reputed testing agency.(C.P.R.I.)	Set	2.00	17,500.00	35,000.00
51	NS 51	Supply of Teletester for testing healthyness of Satelit 3.	Set	RO	45,000.00	
52	NS 52	Supply, installation, testing of Earthing system with 3 nos electrode of 19 mm dia 1.8 meter long steel cored electrolytically coated copper of 250 micron. These electrode should be connected in crow foot manner. The distance between them being not less than 3mtrs. The system should have Maintenance Free, non toxic, environment friendly back fill metrial with high ionic conductivity Terec+ or equivalent. The combined Earth Pit (3 nos) resistance should be less than 10 ohms. Interconnection of the earth pits should be done using Square Clamp the earthing system . In case the soil resistivity exceeds you may add the back fill compound to get the required Value at the unit cost mentioned.	Set	2.00	30,000.00	60,000.00
53	NS 53	Necessary Earth Pit chambers should be provided -3 nos having poly plastic covers capable of withstanding loads up to 2 tonnes having easily removable and lockable covers for inspection of earth pits.	Set	6.00	1,200.00	7,200.00
TOTAL OF Cost of Generation-3 Lightening system NON DSR ITEMS						898,200.00
TOTAL OF NON DSR ELECTRICAL WORKS						45,911,722.99

PROJECT: GOLDEN JUBILEE BUILDING, NIT ROURKELA		
LIST OF APPROVED MAKES		
S.NO.	ITEM	MAKE / BRAND / MANUFACTURER
1	SWITCH GEARS	
a)	ACBs, SFU, Contactors, Aux Relay	SIEMENS / SCHNEIDER / ABB / L & T
b)	MCCBs, 200Amp and Above	
2	MCCBs 160 Amp & below	SIEMENS / LEGRAND / ABB / SCHNEIDER / L & T
3	MCBs / RCCBs / RCOs / DBs	SIEMENS / LEGRAND / ABB / SCHNEIDER / L & T
4	CHANGE OVER SWITCH	L&T / HAVELLS / LEGRAND / HPL
5	MOTOR STARTERS	SIEMENS / CGL / L&T
6	AC STARTERS	SIEMENS / ELECTRONIC TYPE - GETRON
7	PUSH BUTTONS	SIEMENS / L&T / ABB
8	AL. COPPER CONDUCTOR XLPE / PVC INSULATED POWER & CONTROL CABLE	POLYCAB / HAVELLS / GLOSTER / RPG / NICCO / CCI / INCAB / UNIVERSAL / FINOLEX / RR CABLE / V GUARD
9	FR AND PVC INSULATED STANDARAD FLEXIBLE COPPER WIRES AS PER IS 694	FINOLEX / ANCHOR / POLYCAB / HAVELLS / LAPP/ RR / V-GUARD/ HPL
10	PVC RIGID CONDUIT HEAVY DUTY	FINOLEX / PLAZA / HARSHA / PRECISION / AKG / BERLIA / OTHER MAKE WITH APPROVAL BUT MINIMUM THICKNESS 1.5MM FOR 20MM AND 2MM FOR 25MM AND ABOVE
11	PIANO REED TYPE SWITCHES AND ACCESSORIES	ANCHOR / HPL / CONA / RR
12	DECORATIVE SWITCH BOARD COVER WITH WHITE TOP LAMINATION	HYLAM / FORMICA / RR
13	MODULAR TYPE SWITCHS AND ACCESSORIES	LEGRAND (MOSSAIC) / CRAB TREE (ATHENA) / SIEMENS / SCHNEIDER / ANCHOR (WOOD/AVE) / MK / HPL
14	FTL / CFL LIGHT FIXTURE	PHILIPS / CGL / WIPRO
15	MH / SV STREET / FLOOD LIGHT FITTINGS, LAMPS & ACCESSORIES	BAJAJ / PHILIPS / CGL / SCHREDAR/ WIPRO
16	POST TOP / GARDEN LIGHTS	PHILIPS / CGL / SCHREDAR / WIPRO
17	HIGH MAST LIGHTS	PHILIPS / CGL / BAJAJ

LIST OF APPROVED MAKES			
S.NO.	ITEM	MAKE / BRAND / MANUFACTURER	
18	ENERGY METERS		ALSTOM / SECURE

LIST OF APPROVED MAKES		
S.NO.	ITEM	MAKE / BRAND / MANUFACTURER
19	MEASURING INSTRUMENTS	AE / L&T / COSMO / HPL SOCOMEE
20	CEILING FANS	USHA / CGL / BAJAJ
	i) DGS & D	
	ii) ENERGY EFFECTIVE FANSS WITH 5* RATED AS PER BEE	
21	EXHAUST FANS / WALL FANS	CGL / USHA / BAJAJ / HAVELL'S
22	TUBULAR / OCTAGONAL GALVANISED / MILD STEELS POLES	ASTER / BANSAL / BAJAJ / SHREDAR
23	CT / PT	KAPPA / L&T / AE
24	PAINTS	BERGAR / ASIAN / NEROLAC
25	SELECTOR SWITCHES	KAYCEE / L&T / GE
26	GEYSERS	BAJAJ / USHA / CGL / V-GUARD / JAGUAR
27	PANELS BUILDERS	PRAGATHI CONTROLS / ELEINS SWITCHBOARDS / BALAJI ELECTRO CONTROLS / EAP / CPRI APPROVED PANEL MANUFACTURER
28	CABLE TRAY & RACEWAYS	PUSHPAK FABRICATOR / REXTON
29	ELR WITH CBCT	PROKE DEVICES / VOLTAMP
30	BUS TRUNKING	C&S / SCHNEIDER / LEGRAND
NOTE	ANY OTHER MAKES OTHER THAN INDICATED IN LIST MAKE TO BE APPROVED BY CONSULTANTS / NIT	

PA and FA WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF PA & FA WORKS BOQ
- 3 FA & PA BOQ FOR DSR ITEMS
- 4 FA & PA BOQ FOR NON DSR ITEMS
- 5 LIST OF APPROVED MAKES

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON DSR Rates	Total of DSR and NON DSR works
	SUMMARY OF PA & FA WORKS			
1	PA SYSTEM WORKS	324,000.00		324,000.00
2	FA SYSTEM WORKS	558,600.00		558,600.00
3	TOTAL OF NON DSR ITEMS		5,679,708.24	5,679,708.24
	TOTAL OF PA & FA WORKS	882,600.00	5,679,708.24	6,562,308.24

SL.NO	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate RS.	Amount RS.
		PA & FA WORKS BOQ FOR DSR ITEMS				
1		PA SYSTEM				
		CONDUITS & CABLES				
1.1	1.17.2	Supply & Laying of 1100 V Grade 2R X 1.5sq.mm PVC insulated, FRLS, Multi Strand Copper Conductor wires in 25 mm Dia PVC conduits as required.	Rmt.	4,500	25.00	112,500.00
1.2	1.21.2	Supply & Laying of PVC 25mm conduit along with accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required.	Rmt.	4,500	47.00	211,500.00
		TOTAL OF PA SYSTEM WORKS				324,000.00
		FA SYSTEM				
2		CONDUITS & CABLES				
2.1		S/F PVC conduit:				
		Supplying and fixing of following sizes of PVC conduit along with accessories In surface / recess including cutting the wall and making good the same in case of recessed conduit as required.				
	1.21.1	20 mm	Rmt	5,000	41.00	205,000.00
	1.21.2	25 mm	Rmt	660	47.00	31,020.00
	1.21.3	32 mm	Rmt	55	56.00	3,080.00
2.2		Supply and Laying of 3 runs of 1.5 Sqmm wire in 2 mm thick FRLS PVC conduit with all the required accessories like collers, bends, junction boxes, etc as complete.				
a	1.14.1	In 20 / 25mm dia existing conduit.	Rmt	4,500	71.00	319,500.00
		TOTAL OF FA SYSTEM WORKS				558,600.00
		TOTAL OF PA & FA WORKS BOQ FOR DSR ITEMS				882,600.00

SL.NO	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		PA & FA WORKS BOQ FOR NON DSR ITEMS				
I		P.A. SYSTEM				
1	NS1	Supply, installation, testing and commissioning of 16 zone selector P.A. console and with CRCA sheet housing and control desk (Rack) as required. Console shall have all call / call back facility complete with battery back up and it should also work on AC	No	1	84,841.25	84,841.25
2	NS2	Supply, installation, testing and commissioning of 8 zone selector P.A. console and with CRCA sheet housing and control desk (Rack) as required. Console shall have all call / call back facility complete with battery back up and it should also work on AC	No	1	37,199.63	37,199.63
3	NS3	Supply, installation, testing and commissioning of solid state Amplifier of 100 W RMS out put in rack, including necessary control wires, complete.	No	1	24,147.13	24,147.13
4	NS6	Supply, installation, testing and commissioning of 6W wall / ceiling mounted type speakers with talk back facility, in CRCA sheet fabricated housing, complete.	No	275	1,892.61	520,468.44
5	NS7	Supply, installation, testing and commissioning of Volume controller mounted with metal box fixed in wall / partition / conlead in wall.	No	25	978.94	24,473.44
TOTAL FOR PA SYSTEM NON DSR ITEMS						691,129.89
II		FIRE ALARM SYSTEM (ADDRESSABLE)				
6	NS8	Supply, installation, testing & commissioning of analogue addressable Multi sensing detector with necessary fixing accessories required, as per specification and approved make.	SET	700	4,505.00	3,153,500.00
6	NS9	Supply, installation, testing & commissioning of analogue addressable Heat detector necessary fixing accessories required, as per specification and approved make.	SET	23	3,002.00	69,046.00
8	NS10	Supply, installation, testing, & commissioning of addressable dual tone fire alarm hooters cum strobe with necessary fixing accessories required, as per specification and approved make.	SET	40	4,001.00	160,040.00
9	NS11	Supply, installation, testing, & commissioning of Response indicators of with necessary fixing accessories required, as per specification and approved make.	SET	700	110.00	77,000.00

SL.NO	DSR 2012 Item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
10	NS12	Supply, installation, testing & commissioning of addressable fault isolator module with necessary fixing accessories required, as per specification and approved make.equivalent.	SET	52	3,524.18	183,257.10
11	NS13	Supply, installation, testing & commissioning of addressable control module with necessary fixing accessories required, as per specification and approved make.	SET	100	5,514.68	551,468.13
12	NS14	Supply, installation, testing & commissioning of addressable Manual call point with necessary fixing accessories required, as per specification and approved make.	SET	40	3,303.00	132,120.00
13	NS15	Supply, installation, testing & commissioning of 8 Loop panel with compatible with batteries and all necessary fixing accessories required, as per specification and approved make (The panel shall have NO / NC to trip the AC units in case of Emergency.)	SET	2	300,000.00	600,000.00
14	NS3	Supply, installation, testing and commissioning of solid state Amplifier of 100 W RMS out put in rack, including necessary control wires, complete.	No	1	24,147.13	24,147.13
15	NS4	Supply, installation, testing and commissioning of solid state Amplifier of 240 W RMS out put in rack, including necessary control wires, complete.	No	1	38,000.00	38,000.00
TOTAL OF FIRE DETECTION SYSTEM NON DSR ITEMS						4,988,578.36
TOTAL OF PA & FA WORK BOQ FOR NON DSR ITEMS						5,679,708.24

LIST OF APPROVED MAKES		
S.NO.	ITEM	MAKE / BRAND / MANUFACTURER
1	Fire Alarm Control Panel	COOPER / HONEYWELL / ESSAR
2	Analog Addressable Multi Detection Smoke heat Detector	COOPER / HONEYWELL / ESSAR
3	Manual Call Points / MODULES	COOPER / HONEYWELL / ESSAR
4	TRANSPONDER / MODULES	COOPER / HONEYWELL / ESSAR
5	Response Indicator	AS APPROVED BY CONSULTANTS / CLIENT
6	FIRE SURVIVAL CABLE	TYCO / RR KABLE
6	PA Console	AHUJA / PHILIPS / BOSCH / JBL
8	PA Mircophone	AHUJA / PHILIPS / BOSCH / JBL
9	PA Amplifier	AHUJA / PHILIPS / BOSCH
9	PA Speakers	AHUJA / PHILIPS / BOSCH
10	Armoured Cables	KEI / HAVELLS / UNIVERSAL / JBL
11	Power Cables	RR KABLE / KEI / HAVELLS / ANCHOR
12	Shielded Cables	VARSHA / DEEPANJALI
13	MS / GI Conduits	BHARATH / G B
14	FRLS PVC Conduit	VIP / PRECISION

PLUMBING & SANITARY WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF PLUMBING & SANITARY WORKS BOQ
- 3 PLUMBING & SANITARY WORKS BOQ FOR DSR ITEMS
- 4 PLUMBING & SANITARY WORKS BOQ FOR NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates [Rs]	Amount as per NON DSR Rates [Rs]	Total of DSR and NON DSR works [Rs]
I	SANITARY FIXTURES	523,696.95		523,696.95
II	SOIL, WASTE AND VENT PIPE SYSTEM	1,636,038.80		1,636,038.80
III	WATER SUPPLY SYSTEM	1,284,387.25		1,284,387.25
IV	RAIN WATER HARVESTING SYSTEM	311,244.70		311,244.70
V	LANDSCAPE WATER SUPPLY SYSTEM	122,431.90		122,431.90
VI	NON SCHEDULE ITEMS		2,940,724.39	2,940,724.39
TOTAL OF PLUMBING & SANITARY WORKS		3,877,799.60	2,940,724.39	6,818,523.99

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		PLUMBING & SANITARY BOQ FOR DSR ITEMS				
I		SANITARY FIXTURES.				
1.00	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, 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.				
1.01	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.	No.	2	2,964.10	5,928.20
1.02	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, including flush pipe, 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 :				
1.02.1	17.2.1	W.C. pan with ISI marked white solid plastic seat and lid.	No.	67	2,885.10	193,301.70
1.03	17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm 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.				
1.03.1	17.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	No.	15	8,445.00	126,675.00
1.03.2	17.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern.	No.	2	11,046.80	22,093.60
1.04	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. / PVC 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 .				
1.04.1	17.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern.	No.	2	5,152.40	10,304.80

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
1.04.2	17.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern.	No.	2	6,826.65	13,653.30
1.05	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.				
1.05.1	17.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	No.	11	1,848.35	20,331.85
1.05.2	17.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap	No.	56	1,628.95	91,221.20
1.06	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	No.	2	894.70	1,789.40
1.07	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.				
1.07.1	17.10.1	Kitchen sink with drain board				
1.07.2	17.10.1.1	510x1040 mm bowl depth 250 mm	No.	2	6,743.55	13,487.10
1.08	17.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	No.	15	94.00	1,410.00
1.09	17.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.	No.	2	792.60	1,585.20
1.10	17.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings				
1.10.1	17.25.2	Flat back wash basin of size 550x400 mm	No.	2	725.15	1,450.30
1.11	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
1.11.1	17.28.1	Semi rigid pipe				
1.11.2	17.28.1.1	32 mm dia	No.	13	59.50	773.50
1.12	17.31	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.	No.	11	674.05	7,414.55
1.13	17.34	Providing and fixing toilet paper holder :				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
1.13.1	17.34.1	C.P. brass	No.	13	250.95	3,262.35
1.14	17.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.				
1.14.1	17.70.2	Bottle trap 38 mm single piece molded with height of 270 mm, effective length of tail pipe 260 mm from the center of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms.	No.	13	435.30	5,658.90
1.15	17.71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	No.	9	180.10	1,620.90
1.16	17.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.				
1.16.1	17.73.2	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	No.	2	415.20	830.40
1.17	17.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour, weighing not less than 300 gms.	No.	2	452.35	904.70
TOTAL OF SANITARY FIXTURES						523,696.95
II		SOIL, WASTE AND VENT PIPE SYSTEM:				
1.00	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	140	165.60	23,184.00
1.02	17.35	Providing and fixing soil, waste and vent pipes :				
1.02.1	17.35.1	100 mm dia				
1.02.2	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989.	Rmt	83	857.30	71,155.90
1.02.3	17.35.2	75 mm diameter :				
1.02.4	17.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	Rmt	110	744.50	81,895.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
1.03	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 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc.				
1.03.1	17.37.1	For 100 mm dia pipe	No	200	112.50	22,500.00
1.03.2	17.37.2	For 75 mm dia pipe	No	200	110.15	22,030.00
1.04	17.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
1.04.1	17.38.1	100 mm dia				
1.04.2	17.38.1.2	Sand cast iron S&S as per IS - 3989	No	150	353.25	52,987.50
1.04.3	17.38.2	75 mm dia				
1.04.4	17.38.2.2	Sand cast iron S&S as per IS - 3989	No	150	281.15	42,172.50
1.05	17.39	Providing and fixing plain bend of required degree.				
1.05.1	17.39.1	100 mm dia				
1.05.2	17.39.1.2	Sand cast iron S&S as per IS : 3989	No	100	296.35	29,635.00
1.05.3	17.39.2	75 mm dia				
1.05.4	17.39.2.2	Sand cast iron S&S as per IS - 3989	No	100	221.95	22,195.00
1.06	17.40	Providing and fixing heel rest sanitary bend				
1.06.1	17.40.1	100 mm dia				
1.06.2	17.40.1.2	Sand cast iron S&S as per IS - 3989	No	75	342.80	25,710.00
1.06.3	17.40.2	75 mm dia				
1.06.4	17.40.2.2	Sand cast iron S&S as per IS - 3989	No	80	297.45	23,796.00
1.07	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.				
1.07.1	17.43.1	100x100x100 mm				
1.07.2	17.43.1.2	Sand cast iron S&S as per IS - 3989	No	120	579.75	69,570.00
1.07.3	17.43.2	75x75x75 mm				
1.07.4	17.43.2.2	Sand cast iron S&S as per IS - 3989	No	100	438.00	43,800.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
1.08	17.44	Providing and fixing single equal plain junction of required degree :				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
1.08.1	17.44.1	100x100x100 mm				
1.08.2	17.44.1.2	Sand cast iron S&S as per IS - 3989	No	120	522.85	62,742.00
1.08.3	17.44.2	75x75x75 mm				
1.08.4	17.44.2.2	Sand cast iron S&S as per IS - 3989	No	120	378.75	45,450.00
1.09	17.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :				
1.09.1	17.55.1	100 mm				
1.09.2	17.55.1.2	Sand cast iron S&S as per IS - 3989	No	120	469.40	56,328.00
1.09.3	17.55.2	75 mm				
1.09.4	17.55.2.2	Sand cast iron S&S as per IS - 3989	No	120	333.45	40,014.00
1.10	17.56	Providing and fixing terminal guard :				
1.10.1	17.56.1	100 mm				
1.10.2	17.56.1.2	Sand cast iron S&S as per IS - 3989	No	120	244.10	29,292.00
1.10.3	17.56.2	75 mm				
1.10.4	17.56.2.2	Sand cast iron S&S as per IS - 3989	No	120	221.95	26,634.00
1.11	17.57	Providing and fixing collar :				
1.11.1	17.57.1	100 mm				
1.11.2	17.57.1.2	Sand cast iron S&S as per IS - 3989	No	120	238.25	28,590.00
1.11.3	17.57.2	75 mm				
1.11.4	17.57.2.2	Sand cast iron S&S as per IS - 3989	No	120	169.65	20,358.00
1.12	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :				
1.12.1	17.58.1	100 mm	No	120	207.85	24,942.00
1.12.2	17.58.2	75 mm	No	120	176.50	21,180.00
1.13	17.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :				
1.13.1	17.59.1	100 mm	No	120	61.70	7,404.00
1.13.2	17.59.2	75 mm	No	120	52.35	6,282.00
1.14	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 :				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
1.14.1	17.60.1	100 mm inlet and 100 mm outlet				
1.14.2	17.60.1.1	Sand cast iron S&S as per IS: 3989	No	147	801.70	117,849.90
1.15	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) :				
1.15.1	17.61.1	100 mm dia	No	20	252.10	5,042.00
1.15.2	17.61.2	75 mm dia	No	20	180.40	3,608.00
1.16	17.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work .				
1.16.1	17.65.1	100 mm diameter pipe	Rmt	83	28.75	2,386.25
1.16.2	17.65.2	75 mm diameter pipe	Rmt	110	22.00	2,420.00
2.00	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 :				
2.01.1	19.1.1	100mm dia	Rmt	15	150.10	2,251.50
2.01.2	19.1.2	150mm dia	Rmt	85	219.05	18,619.25
2.01.3	19.1.3	200 mm diameter	Rmt	10	323.05	3,230.50
2.01.4	19.1.4	250mm dia	Rmt	190	446.15	84,768.50
2.02	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design.				
2.02.1	19.2.2	150 mm diameter S.W. pipe	Rmt	85	607.70	51,654.50
2.02.2	19.2.3	200 mm diameter S.W. pipe	Rmt	10	708.40	7,084.00
2.02.3	19.2.4	250 mm diameter S.W. pipe	Rmt	190	819.20	155,648.00
2.03	19.4	Providing and fixing square-mouth Square gully trap class Sp-1 complete with C.I grating brick masonry chamber with water tight C.I. Cover with frame of 300X300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be less than 2.70 kg as per standard design :				
2.03.1	19.4.3	180x150 mm size P type				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.03.2	19.4.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No.	5	1,365.55	6,827.75
2.04	19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with 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 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with 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 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
2.04.1	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).				
2.04.2	19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	No.	20	1,732.00	34,640.00
2.05	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).				
2.05.1	19.7.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	No.	2	15,322.95	30,645.90
2.06	19.8	Extra for depth for manholes :				
2.06.1	19.8.1	Size 90x80 cm				
2.06.2	19.8.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	Rmt	10	4,061.70	40,617.00
2.06.3	19.8.2	Size 120x90 cm				
2.06.4	19.8.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	Rmt	10	4,866.75	48,667.50
2.07	19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m				
2.07.1	19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	10	3,498.25	34,982.50

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.08	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 :				
2.08.1	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 sand:4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :				
2.08.2	19.11.1.1	With Common Burnt Clay F.P.S (non modular) bricks of class designation 7.5	No.	3	12,943.40	38,830.20
2.09	19.12	Extra depth for circular type manhole 1.22m internal dia (at bottom) beyond 1.68 m to 2.29 m :				
2.09.1	19.12.1	With Common Burnt Clay F.P.S (non modular) bricks of class designation 7.5	No.	3	4,522.30	13,566.90
2.10	19.15	Providing MS Foot rests including fixing in manhole 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) as per standard design:				
2.10.1	19.15.1	With 20x20mm square bar	No.	45	227.95	10,257.75
2.11	19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm 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.	No.	88	256.75	22,594.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		TOTAL OF SOIL, WASTE AND VENT PIPE SYSTEM				1,636,038.80

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
III		WATER SUPPLY SYSTEM:				
1.00	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	100	165.60	16,560.00
2.00	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.				
2.01.1	18.8.1	15 mm nominal outer dia Pipes	Rmt	10	218.65	2,186.50
2.01.2	18.8.2	20 mm nominal outer dia Pipes	Rmt	483	243.05	117,393.15
2.01.3	18.8.3	25 mm nominal outer dia Pipes	Rmt	10	297.95	2,979.50
2.01.4	18.8.4	32 mm nominal outer dia Pipes	Rmt	10	358.90	3,589.00
2.02	18.10	Providing and fixing G.I. pipes complete with G.I.fittings and clamps, including cutting and making good the walls etc.				
		Internal work - Exposed on wall.				
2.02.1	18.10.2	20mm dia. Nominal bore	Rmt	10	188.05	1,880.50
2.02.2	18.10.3	25mm dia. Nominal bore	Rmt	38	243.15	9,239.70
2.03.3	18.10.4	32mm dia. Nominal bore	Rmt	76	296.50	22,534.00
2.03.4	18.10.5	40mm dia. Nominal bore	Rmt	47.25	364.10	17,203.73
2.03.5	18.10.6	50mm dia. Nominal bore	Rmt	560	453.65	254,044.00
2.04	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:				
2.04.1	18.11.1	15 mm dia nominal bore	Rmt	5	229.10	1,145.50

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
2.04.2	18.11.2	20 mm dia nominal bore.	Rmt	5	251.30	1,256.50

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.05	18.12	Providing and fixing G.I pipes complete with G.I fittings including trenching and refilling etc.				
		External Work				
2.05.1	18.12.6	50 mm dia nominal bore	Rmt	1192	355.95	424,292.40
2.05.2	18.12.7	65 mm dia nominal bore	Rmt	390	453.55	176,884.50
2.05.3	18.12.8	80 mm dia nominal bore	Rmt	10	573.40	5,734.00
2.06	18.17	Providing and fixing gun metal gate valve with C.I wheel of approved quality (screwed end):				
2.06.1	18.17.1	25 mm nominal bore.	Each	35	372.95	13,053.25
2.06.2	18.17.2	32 mm nominal bore.	Each	7	450.90	3,156.30
2.06.3	18.17.3	40 mm nominal bore.	Each	4	546.05	2,184.20
2.06.4	18.17.4	50 mm nominal bore.	Each	18	780.60	14,050.80
2.06.5	18.17.5	65 mm nominal bore.	Each	4	1,073.25	4,293.00
2.06.6	18.17.6	80 mm nominal bore.	Each	2	1,832.95	3,665.90
2.07	18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete:				
2.07.1	18.18.2	20 mm dia nominal bore	Each	3	360.20	1,080.60
2.07.2	18.18.3	25 mm dia nominal bore	Each	1	421.65	421.65
2.08	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse 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) , i/c 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.				
2.08.1	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	2	5,392.90	10,785.80

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.09	18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse 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), i/c 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.				
2.09.1	18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	2	9,277.10	18,554.20
2.10	18.40	Painting G.I. Pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality:				
2.10.1	18.40.1	15 mm diameter pipe	Rmt	10	4.40	44.00
2.10.2	18.40.2	20 mm diameter pipe	Rmt	493	5.15	2,538.95
2.10.3	18.40.3	25 mm diameter pipe	Rmt	314	6.60	2,072.40
2.10.4	18.40.4	32 mm diameter pipe	Rmt	116	7.80	904.80
2.10.5	18.40.5	40 mm diameter pipe	Rmt	47.25	8.90	420.53
2.10.6	18.40.6	50 mm diameter pipe	Rmt	1752	10.55	18,483.60
2.10.7	18.40.7	65 mm diameter pipe	Rmt	415	12.95	5,374.25
2.10.8	18.40.8	80 mm diameter pipe	Rmt	32	15.00	480.00
2.11	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.	Per Litre	1000	6.10	6,100.00
2.12	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931.				
2.12.1	18.49.1	15 mm nominal bore	No.	2	397.50	795.00
2.13	18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 a) 15 mm nominal bore.				
2.13.1	18.53.1	15mm nominal bore	No.	222	449.35	99,755.70
2.14	18.54	Providing and fixing PTMT bib cock of approved quality and colour.				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
2.14.1	18.54.1	15mm nominal bore, 86 mm long, weighing not less than 88 gms	No.	2	130.10	260.20

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
2.14.2	18.54.3	15 mm nominal bore, 165 mm long, weighing not less than 110 gms	No.	2	199.80	399.60
2.15	18.55	Providing and fixing PTMT stop cock of approved quality and colour.				
2.15.1	18.55.3	Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms	No.	2	214.90	429.80
2.16	18.56	Providing and fixing PTMT pillar cock of approved quality and colour .				
2.16.1	18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	No.	11	202.25	2,224.75
2.17	18.57	Providing and fixing PTMT, push cock of approved quality and colour.				
2.17.1	18.57.2	15 mm nominal bore, 80 mm long, weighing not less than 46 gms	No.	9	106.85	961.65
2.18	18.58	Providing and fixing PTMT grating of approved quality and colour.				
2.18.1	18.58.1	Circular type				
2.18.2	18.58.1.2	125 mm nominal dia with 25 mm waste hole	No.	147	50.15	7,372.05
2.19	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.				
2.20	18.62.3	25 mm nominal bore, 152mm long, weighing not less than 440 gms	No.	2	543.65	1,087.30
2.21	18.72	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :				
2.21.1	18.72.1	100 mm dia Ductile Iron Class K-7 pipes	Rmt		840.25	0.00
2.22	18.74	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.				
2.22.1	18.74.1	15 mm nominal bore with 30cm length	No.	10	59.50	595.00
2.23	18.76	Cutting holes up to 30x30 cm in walls including making good the same.				
2.23.1	18.76.1	With common burnt clay F.P.S. (non modular) bricks	No.	20	152.00	3,040.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
2.24	18.77	Cutting holes up to 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.	No.	20	143.95	2,879.00
TOTAL OF WATER SUPPLY SYSTEM						1,284,387.25

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
IV		RAIN WATER HARVESTING SYSTEM:				
1.00	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	150	165.50	24,825.00
2.00	19.9	Constructing brick masonry circular type manhole 0.91 m 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 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :				
2.01	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm 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 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) :				
2.01.1	19.9.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No.	18	7,007.40	126,133.20
2.02	19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m				
2.02.1	19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	10	3,498.25	34,982.50
2.03	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:				
2.03.1	19.6.4	300 mm dia. R.C.C. Pipe.	metre	126	422.90	53,285.40
2.03.2	19.6.5	450 mm dia. R.C.C. Pipe.	metre	116	620.85	72,018.60
		TOTAL OF RAIN WATER HARVESTING SYSTEM:				311,244.70

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
V		LANDSCAPE WATER SUPPLY SYSTEM:				
1.00	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	460	165.60	76,176.00
2.00	18.17	Providing and fixing gun metal gate valve with C.I wheel of approved quality (screwed end):				
2.01.1	18.17.1	25 mm nominal bore.	Each	20	372.95	7,459.00
2.01.2	18.17.5	65 mm nominal bore.	Each	6	1,073.25	6,439.50
2.02	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse 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) , i/c 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.				
2.02.1	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	6	5,392.90	32,357.40
		TOTAL OF LANDSCAPE WATER SUPPLY SYSTEM:				122,431.90
		TOTAL OF PLUMBING & SANITARY WORKS BOQ FOR DSR ITEMS				3,877,799.60

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		PLUMBING & SANITARY BOQ FOR NON DSR ITEMS				
VI		NON SCHEDULE ITEMS				
		SANITARY FIXTURES.				
1	NS1	Supplying, installing, testing and commissioning approved make oval wash basin white colour fixed under counter with single hole 15mm Long body Pillar cock unit, 32mm dia CP waste coupling, 32mm dia C.P.bottle trap with C.P. extension pipe, 1 No.15mm dia C.P. angle cock 1 No. C.P. flexible inlet connection pipe G.I. expansion bolts etc., complete including silicon sealant. Size 560 x 430 mm.	No	6	5,912.00	35,472.00
		Note: We have designed for low volume flow rate 2.75 liters/min of water for sink to meet the requirement of Griha standards.				
		Make:-Hind ware, Model 10049				
		Pillar Cock Make Jaguar Model No.021				
2	NS2	Supplying, installing, testing and commissioning approved make white colour European water closet wall mounted pattern type 'p' trap with 4/2 Lts.Capacity Dual Flush Concealed Tank. The quoted price shall also include plastic solid seat and cover with rubber buffers and flap, heavy duty plastic hinges,chair Brackets etc., complete.	No.	6	15,306.50	91,839.00
		Make:-Hindware,Pure Model 20061, Concealo 508179				
		Note: We have designed for low volume flushing from 2-4 liters/flush of water for EWC to meet the requirement of Griha standards.				
3	NS3	Supplying, installing, testing and commissioning approved make 15mm CP health faucet with CP flexible tube 1.0m long, CP crutch, nozzle angular stop cock with wall flange etc.,complete.	No.	6	2,254.00	13,524.00
		Note: We have designed for low volume flow rate 6.0 liters/min of water for Health Faucet to meet the requirement of Griha standards.				
		Make:-Jaguar ,Model No.573				
4	NS4	Supplying and fixing approved make C.P. toilet paper holder complete.	No.	6	1,236.25	7,417.50
		Make:- Jaguar Model no.1153N				
5	NS5	Supplying and Fixing of approved make C.P.towel ring including C.P. screws with Fischer plugs etc., complete.(Near Wash Basin)	No.	6	903.00	5,418.00
		Make:- Jaguar Model no.1121				
6	NS6	Supplying and fixing approved make FRP Liquid Soap dispensers complete with CP fixing screws and first fill of liquid soap.	No.	10	1,552.50	15,525.00
		Make:- Kimberly Calrk				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
7	NS7	Supplying, installing, testing and commissioning approved make white coloured large flat back urinals with 40 mm C.P. dome type waste coupling 40 mm dia heavy duty PVC waste pipe up to Nahani trap, 15 mm dia C.P. push cock with C.P. flush pipe, C.P. spreader, expansion bolts etc., complete. Size: 600 X 400 X 380 (Urinal partition excluded).	No.	4	11,960.00	47,840.00
		Note: We have designed for low volume flow rate 1.50 liters/min of				
		water for Urinals to meet the requirement of Griha standards.				
		Make:- Jaquar Model no.077				
		Make:-Hind ware, Model 60010				
8	NS8	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with Aluminum frame of approved make and shade with 6 mm thick hard board backing: Rectangular shape 453X357mm.	No.	6	1,250.00	7,500.00
9	NS9	Supplying and fixing approved make C.P. twin robe hook with C.P. screws etc., complete. Fixed on the toilet door.	No.	6	632.50	3,795.00
		Make:- Jaquar Model no.1161N				
10	NS10	Supplying and fixing approved make Automatic Hand drier Sensor operated working on 230V electric supply complete including wiring.	No.	6	5,000.00	30,000.00
		Make:- Kimberly Calrk				
11	NS11	Fixing of approved make 20 mm dia CP grab bar 1000 mm long with CP end clamps, screws etc., complete.	No.	4	2,500.00	10,000.00
12	NS12	Supplying, installing, testing and commissioning approved make SS kitchen sink with single bowl & drainboard made of 18 guage sheet, 1 No. 40mm dia C.P. wastecoupling, 40 mm dia C.P. Bottle trap with C.P.extension pipe, 1 Nos. 15mm dia hot and cold sink mixer unit wall mounted type , C.I.brackets etc., complete. Size:-900x500	No.	3	11,198.00	33,594.00
		Note: We have designed for low volume flow rate 2.75 liters/min of				
		water for Sink Cock to meet the requirement of Griha standards.				
		Sink Make:- Franke / Futura/Jayna/Nirali				
		Make:-Jaquar, Model No.347, Sink Make:-Jayna Model no.SBSD 04				
13	NS13	Supplying and Fixing of approved make 15mm CP hose bib with necessary CP wall flanges etc.,complete.	No.	5	960.25	4,801.25
		Make:-Jaquar, Model No.107				
TOTAL OF SANITARY FIXTURES.						306,725.75

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		SOIL, WASTE AND VENT PIPE SYSTEM:				
14	NS 14	Supplying, laying, jointing, testing and commissioning approved make UPVC pipes class III 6 Kg/cm2 with solvent cement joints confirming to IS 4985 for kitchen sink, wash basin outlets & anti syphonage pipes. the quoted rate shall include necessary chasing in walls making good the same in C.M. 1:4, necessary fittings viz., elbows, tees etc., including M.S angle with G.I clamps complete.				
a	a	40 mm dia	Rmt	90	135.15	12,163.50
b	b	50 mm dia	Rmt	60	146.07	8,764.20
c	c	63 mm dia	Rmt	140	188.86	26,440.40
15	NS 15	Supplying, laying, jointing, testing and commissioning approved make UPVC pipes SWR grade B confirming to IS 13592 with rubber ring joints confirming to IS 5382. The quoted rate shall include necessary fittings like Tees, Bends, Offsets etc., including M.S angle with G.I clamps complete.				
a	a	75 mm dia	Rmt	441	314.86	138,853.26
b	b	110 mm dia	Rmt	330	361.15	119,179.50
c	c	160 mm dia	Rmt	55	646.26	35,544.30
16	NS 16	Supplying and fixing approved make UPVC multi inlet floor trap with 75mm dia outlet and C.P. cover on top etc., complete with cement concrete support around the floor trap.	Each	147	450.00	66,150.00
17	NS 17	Supplying, jointing, testing & Commissioning of approved make UPVC pipe SWR grade "A" confirming to IS: 13592 with rubber ring joints for rain water disposal confirming to IS5382.The quoted rate shall include necessary bends,etc.,including M.S angle with G.I clamps complete .				
a	a	110 mm dia	Rmt	58	337.06	19,549.48
b	b	160 mm dia	Rmt	50	587.08	29,354.00
c	c	225 mm dia	Rmt	485	1,050.00	509,250.00
18	NS 18	Providing, Supplying & Drilling/Core Cutting of required dia outlets using low vibration mechanical means. Cost to include identification of embedded reinforcement using proformeter, closing of core cut using self sealing non-shrink grouts of approved make either single or double component with necessary form work, staging, tools, etc.,				
		SLABS				
		RCC slabs (115mm to 175mm Thick)				
a	a	For 50 mm pipes	No.	1	650.00	650.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
b	b	For 100 mm pipes	No.	1	1,100.00	1,100.00
c	c	For 125 mm pipes	No.	220	1,250.00	275,000.00
d	d	For 150 mm pipes	No.	1	1,500.00	1,500.00
e	e	For 200 mm pipes	No.	1	2,000.00	2,000.00
TOTAL OF SOIL, WASTE AND VENT PIPE SYSTEM:						1,245,498.64
WATER SUPPLY SYSTEM:						
19	NS 19	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:				
a	a	25 mm dia nominal bore.	Rmt	276	350.00	96,600.00
b	b	32 mm dia nominal bore.	Rmt	40	410.00	16,400.00
20	NS 20	Providing and fixing G.I. pipes complete with G.I.fittngs and clamps, including cutting and making good the walls etc.				
		Internal work - Exposed on wall.				
a	a	65mm dia. Nominal bore	Rmt	25	650.00	16,250.00
b	b	80mm dia. Nominal bore	Rmt	32	850.00	27,200.00
21	NS 21	Supplying and fixing in position P.C.C. pedestals 400x230x230mm with MS brackets & GI clamps for laying pipes on terrace.	No	15	350.00	5,250.00
22	NS 22	Supplying, installing, testing and commissioning approved make Pressure Reducing Valve internal parts having screwed ends etc., complete..				
a	a	32 mm dia	No	2	6,500.00	13,000.00
23	NS 23	Supplying, installing, testing and commissioning approved make Sludge Cutter pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph, with starter,				
a	a	Duty of Pump : 3.0 Lps @ 15.0m Head 1 No. Working + 1 No. Stand By = 1 Set (From Sewage Sump to Chamber)	Set	2	165,000.00	330,000.00
24	NS 24	Supplying, fixing and testing inlet, outlet, vent and over flow pipes, fittings with C.I frame with cover to over head tank complete with PVC rungs, etc complete as shown in the drawing. all puddle flanges to be hot dip galvanized	Set	1	100,000.00	100,000.00
a	a	32 mm dia - 4 Nos				
b	b	50 mm dia - 8 Nos.				
c	c	65 mm dia - 2 Nos.				
d	d	80 mm dia - 2 Nos.				
e	e	150 mm dia - 2 Nos.				
f	f	Manhole frame and cover 600 X 600mm - 6 nos.				
g	g	PVC rungs - 60				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
25	NS 25	Supplying, fixing and testing inlet, outlet, vent and over flow pipes, fittings with C.I frame with cover to U.G.Sump complete with PVC rungs, etc complete as shown in the drawing. all puddle flanges to be hot dip galvanized.	Set	1	75,000.00	75,000.00
a	a	50 mm dia - 2 Nos.				
b	b	65 mm dia - 2 Nos.				
c	c	80 mm dia - 1 Nos.				
d	d	100 mm dia - 1 Nos.				
e	e	200 mm dia - 1 Nos.				
f	f	Manhole frame and cover 600 X 600mm - 4 nos.				
g	g	PVC rungs - 60				
28	NS 28	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	Set	1	130,000.00	130,000.00
		Duty of Pump :				
		2.0 Lps @ 90.0m Head				
		1 No. Working + 1 No. Stand By = 1 Set				
		(From Domestic Water Sump to Over Head Tank)				
29	NS 29	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	Set	1	90,000.00	90,000.00
		Duty of Pump :				
		2.50 Lps @ 60.0m Head				
		1 No. Working + 1 No. Stand By = 1 Set				
		(From STP Sump to Over Head Tank)				
31	NS 31	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1PH.	No	1	50,000.00	50,000.00
		Duty of Pump :				
		4.0 Lps @ 15.0m Head				
		1 No. Working + 1 No. Stand By = 1 Set				
		(From Basement Sump to External Drain)				
32	NS 32	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	No	1	60,000.00	60,000.00
		Duty of Pump :				
		10.0 Lps @ 15.0m Head				
		1No. Working +1 No. Stand By = 1 Set				
		(From Rain Water Sump to External Drain)				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
33	NS 33	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	No	1	40,000.00	40,000.00
		Duty of Pump :				
		1.0 Lps @ 15.0m Head				
		1No. Working +1 No. Stand By = 1 Set				
		(From Pump Room Sump to External Drain)				
34	NS 34	Providing, installing, testing and commissioning of approved make Conductive type level sensor with SS 316 probes MS 2-1/2" table E std flange and weather proof cast aluminium enclosure to sense two levels of the under ground sump and the over head water storage tank.	No	12	3,800.00	45,600.00
35	NS 35	Supply & laying of 4 core 1.5sqmm copper armoured cable from UG sump sensors to level control instruments laid in a 32mm dia. PVC 6Kg/sqcm pipes.	No	12	800.00	9,600.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
36	NS 36	Supplying and fixing of digital percentage level indicator for the storage tanks consisting of display unit and level sensor. The display unit should have 2-1/2 digit seven segment LED to display the levels as 0%, 10% --- 100%. The unit should be weather proof and wall / panel mounted input to the unit should be 230V AC. The level sensor should consists of float operated magnetic float switch with one PUF float suitable mounting flange and flame proof enclosure. Quoted rate shall include necessary conduits and cabling.	No	12	2,800.00	33,600.00
37	NS 37	Supplying Installing, testingand commissioning COMMON control panel for PHE system consisting of Domestic Water 7.50HPx 2nos., Basement collection sump 2HP, Pump Room Collection Sump 1HP,Sewage Pump 2HP x 2nos, Rain Water Pumps 5HP x 3nos.,Spare 5HP 2nos. consisting of the following :				
		INCOMING :				
		1No.Set of phase indicating lamps with SFU Rated 350A				
		1 No. Set of 400 Amps. TPNE Al. Bus bars				
		1 No. 0-400 Amps. Ammeter, 1 No. 0-600V Voltmeter				
		with phase selector switch, Isolating Switch 400A				
		OUTGOING for Domestic Water Pump:				
		1No. 100 Amps MCB				
		1 No. S/D starter suitable for 7.50 HP x 2nos.				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Basement collection sump pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 2 HP				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Pump Room collection sump pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 1 HP				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		OUTGOING for Sewage collection sump pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 2 HP x 2nos.				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Rain water pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 5 HP x 3nos.				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Spare pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 5 HP(2nos)				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
a	a	1No. Automanual selector switch	No	1	100,000.00	100,000.00
38	NS 38	CONTROL CABLES Supplying, laying, testing & commissioning of FRLS, PVC outer sheath, steel armoured, aluminium / copper conductor, 1100v grade power cables with glands etc. The cables shall be laid in tray / Hume pipe / in trenches/on walls/ floor etc. as required. For cables laid out door the rate shall include earth excavation providing brick and sand protection, refilling and compacting the earth. The rate shall excludes tray & Hume pipes. The minimum size of the cables shall as mentioned below,				
a	a	3.0 sq.mm	Rmt	1000	150.00	150,000.00
		TOTAL OF WATER SUPPLY SYSTEM:				1,388,500.00
		TOTAL OF PLUMBING & SANITARY WORK BOQ FOR NON DSR ITEMS				2,940,724.39

FIRE FIGHTING SYSTEM BOQ

- 1 DIVIDER
- 2 SUMMARY OF FIRE FIGHTING BOQ
- 3 FIRE FIGHTING BOQ FOR DSR ITEMS
- 4 FIRE FIGHTING BOQ FOR NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates [RS]	Amount as per NON DSR Rates [RS]	Total of DSR and NON DSR works [Rs]
	SUMMARY OF FIRE FIGHTING WORKS			
I	CIVIL WORKS & FIRE FIGHTING WROKS	49,680.00	-	49,680.00
II	NON SCHEDULE ITEMS		15,022,265.69	15,022,265.69
TOTAL OF FIRE FIGHTING WORKS		49,680.00	15,022,265.69	15,071,945.69

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		FIRE FIGHTING BOQ FOR DSR ITEMS				
I		CIVIL WORKS				
1	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	a) Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	300	165.60	49,680.00
		TOTAL OF CIVIL WORK				49,680.00
		TOTAL OF FIRE FIGHTING WORKS BOQ FOR DSR ITEMS				49,680.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		FIRE FIGHTING BOQ FOR NON DSR ITEMS				
1	NS 1	Supply, Ertection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size. The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping. The quoted rates shall also include for making holes in masonary/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions. Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a	a	100mm nominal dia	Rmt	10.00	1,667.00	16,670.00
2	NS 2	Supply, Installation, testing and commissioning of Non Return Valve CI Double Flanged with Nut, Bolt and Washers etc., as per IS:5312 (SIR/AARKO/LP/KALPNA/KARTAR/ISI Marked)				
a	a	100mm nominal dia	Rmt	1.00	2,721.48	2,721.48
3	NS 3	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings. (Make : Kirolskar/Zolota/Kartar/Sir				
a	a	100mm nominal dia	Rmt	1.00	4,135.86	4,135.86
4	NS 4	Supply, Installation, Testing and Commissioning of ``Y'' Strainer, including Nut, Bolt, Gasket complete in all respects.				
a		200mm nominal dia	Rmt	1.00	41,732.35	41,732.35
5	NS 5	Supply, Erection, Testing and commissioning of C.I.Gate valves as per IS:14846 (PN 10 Rating, for suction side of the pumps) and rising spindle type with flanges, bolts, nuts, washers, gaskets etc.				
a	a	200mm nominal dia	No.	1.00	42,846.70	42,846.70
6	NS 6	Supply, Installation of Flow metre (Electronic type) on Test line to measure 150 % of pump flow and suitable to 200 mm dia.				
			No.	4.00	1,840.00	7,360.00
7	NS 7	Exhaust pipe for Diesel engine of 150 mm dia M.S. Medium grade with mineral wool insulation with aluminum sheet.				
a	a	150 mm dia M.S. Medium grade with mineral wool insulation with aluminum sheeting.	Rmt	25.00	2,702.50	67,562.50
8	NS 8	Supplying, erecting and commissioning of Landing Hydrants comprising of the following in the Fire duct;				
			Set	30.00	32,200.00	966,000.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		twin headed hydrant valve as per IS 5290, made of gunmetal with 63 mm dia instantaneous outlet of 80 mm dia fanged inlet ,Blank caps , chain and hand wheels etc complete.- 2 lengths of 15 M long, 63mm dia RRL hose with instantaneous couplings and Hoses shall be stored in side the hose cabinet. 1 no. Gun metal short branch pipe with nozzle. Hose reel drum of swinging type with 19mm dia Rubber braided hose of 40M. length with Gate valve (upstream) and Shut off nozzle, complete. Fire duct Shutter fabricated out of M.S.sheet and frame, door shall be 900mm x 1200 mm min. & fixed with 4 mm thick Glass, suitable Rubber beeding and Locking arrangement. Quoted rate shall include all fasteners etc, and complete shutter shall be powder coated of approved colour both inside and out side. 1 No				
9	NS 9	Supplying, installing, testing and commissioning of yard hydrant comprising of the following, twin headed hydrant valve as per IS 5290, made of gunmetal with 63 mm dia instantaneous out & 80 mm dia fanged inlet inlet, Blank cap , chain and hand wheel etc complete. 2 lengths of 15 M long, 63mm dia RRL hose with instantaneous couplings and Hoses shall be stored in side the hose cabinet. 1 no. Gun metal short branch pipe with nozzle. M.S. Hose cabinet stand mounted type fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beading) door and size of the cabinet shall be 600mm x 750 mm x 250 mm Quoted rate shall be includes suitable stand for mounting, all fasteners etc, and cabinet shall be powder coated of approved colour both inside and out side. M.S. Hose cabinet stand mounted type fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beading) door and size of the cabinet shall be 600mm x 750 mm x 250 mm Quoted rate shall be includes suitable stand for mounting, all fasteners etc, and cabinet shall be powder coated of approved colour both inside and out side.	Set	14.00	30,475.00	426,650.00
10	NS 10	Supplying and fixing approved make 20mm dia. with automatic air release valve with unions etc. complete.	No.	3.00	2,895.60	8,686.80
11	NS 11	Supplying, installing, testing and commissioning of Gun metal chrome finished Ball valves with fittings of screwed end type.				
a	a	50 mm dia	Nos.	23.00	5,306.00	122,038.00
12	NS 12	Supplying, installing, testing and commissioning flow switch on sprinkler distribution header on each floor and shall be connected to fire alarm panel through cable. Cable shall be measured separately.	Nos.	28.00	7,475.00	209,300.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
13	NS 13	Supply & fixing of approved type rosette plates (Recessed type, in two piece) for Sprinklers below false ceiling area. The Rosette shall be fabricated by M.S. plate of 2mm thick and the finish shall be powder coated and color shall be as approved by architects / clients.	Nos.	2000.00	92.00	184,000.00
14	NS 14	Supplying, installing and commissioning Portable Fire extinguishers of following type & capacity.				
a	a	Carbon-di-oxide type fire extinguisher of 2 kgs. Capacity, CO2 gas filled in brand new seamless cylinder with powder coated finish, made out of Manganese steel, with wheel type valve, discharge nozzle, bend & horn, wall mounting bracket etc. complete, confirming to IS: 2878.	Nos.	2.00	3,910.00	7,820.00
b	b	Carbon-di-oxide type fire extinguisher of 4.5 kgs. Capacity, CO2 gas filled in brand new seamless cylinder with powder coated finish, made out of Manganese steel, with wheel type valve, discharge nozzle, bend & horn, wall mounting bracket etc. complete, confirming to IS: 2878.	Nos.	28.00	6,095.00	170,660.00
c	c	Mechanical Foam type fire extinguisher 9Lts. Capacity, with initial filling in brand new cylinder with powder coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, hose and ABS type branch pipe and wall mounting bracket etc. complete, confirming to IS: 10204.	Nos.	2.00	1,782.00	3,564.00
d	d	ABC type fire extinguisher of 5 Kgs. Capacity, with initial filling in brand new cylinder with powder coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, discharge hose, wall mounting bracket etc. complete, confirming to IS:2171.	Nos.	12.00	2,357.00	28,284.00
e	e	Water CO2 type fire extinguisher 9 lts. Capacity, initial filling in brand new cylinder of powder coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge & wall mounting bracket etc. complete confirming to IS:940.	Nos.	28.00	1,380.00	38,640.00
15	NS 15	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut, PVC non-reflective self adhesive vinyl painted foam board, complete with mirror fasteners.				
a	a	Signage with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm x 30 cm and shall be fixed at the height of 2 mts. from finished floor near Manual call points.	Nos.	30.00	1,265.00	37,950.00
b	b	Floor identification signage (ie, GROUND FLOOR ...etc.) at each stair enclosure on every floor, indicating the floor number in words, lettering size shall be 7.5 cm with contrasting colour from back ground. Size shall be 15cm x 60cm	Nos.	30.00	1,265.00	37,950.00
16	NS 16	Providing and fixing in position the signages " FIRE ORDER" it should contain the following matter on 3mm thick "Opaque" PVC foam board of computerized cut, PVC non-reflective self adhesive vinyl painted foam board of 3' x 4'.				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
a	a	ALERT THE SECURITY AT SECURITY ROOM BY ACTUATING MANUAL CALL POINT LOCATED AT STRATEGIC LOCATIONS. EVACUATE THE OCCUPANTS BY USING FIRE EXITS AND EMERGENCY EXITS ONLY AND ASSEMBLE AT VARIOUS ASSEMBLY POITS. IF POSSIBLE TRY TO EXTINGUISH THE FIRE BY USING NEAREST / SUITABLE PORTABLE EXTINGUISHER OR WATER FROM NEAREST WET RISER. BE CALM AND DO NOT GIVE ANY ROOM FROM PANIC, WALK, DO NOT RUN. IF YOU ENCOUNTER SERIOUS DIFFICULTY IN EVACUATION, FLAT AND TRY TO ATTRACT ATTENTION OF RESCUE TEAM.	Nos.	4.00	6,670.00	26,680.00
b	b	ACTION BY SECURITY/RECEPTION UPON RECEIPT OF INFORMATION THROUGH FIRE ALARM OR FIRE DETECTORS OR BY USING PUBLIC ADDRESS SYSTEM. ALERT THE OCCUPANTS BY USING PUBLIC ADDRESS SYSTEM. INFORM FIRE CONTROL THROUGH ANY ONE OF THE FOLLOWING PHONE NUMBERS: REFER EVACUATION PLAN FROM EVACUATING STANDARD PEOPLE. GUIDE THE FIRE FORCE, ON THEIR ARRIVAL TO THE SEAT OF FIRE. IN CASE OF THE CASUALTIES, CALL AMBULANCE BY DIALLING NUMBER..... FIRE FIGHTING AGNECY ----- PHONE : ----- FAX : -----	Nos.	4.00	3,450.00	13,800.00
FIRE PUMP ROOM EQUIPMENT						
17	NS 17	SITC of Electric Driven Hydrant/Sprinkler Fire Pump suitable for automatic operation consisting of Horizontally Mounted Centrifugal Fire Pump 2280 LPM, 2900 RPM, 60 HP, 90 Mtr. Head. The Pump casing shall be of C.I. and Impeller shall be of Bronze and Shaft shall be Stainless Steel. (Make : Kirloskar/Mather & Platt)	No.	2.00	378,566.00	757,132.00
18	NS 18	SITC of Diesel Engine Driven Fire Pump 2280 LPM, 90 Mtr. Head 72 HP, 1500/1800 RPM, Horizontal Split Casing type fire pump with Water Cooled Diesel Engine with Flexible coupling, Common Bed Plate etc. for mounting the Diesel Engine and Pump, complete in all respects	No.	1.00	674,130.00	674,130.00
19	NS 19	Supply, Installation, Testing and Commissioning of Jockey Pump 180 LPM, 90 Mtr. Head, 2900 RPM, 15 HP, complete in all respects (Make : Kirloskar/Mather & Platt)	No.	1.00	117,894.00	117,894.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
20		Control Panel for Fire pumps.				
a	NS 20	Supply, Installation, Testing and Commissioning of Motor Control Centre for above Pumps, made out of 2 mm thick CRCA Sheet with suitable relays ,SF units with MCCB, for incoming and outgoing feeders, connects star delta starter indicating lamp, ammeter, voltmeter selector switch complete in all respects.	No.	1.00	268,550.00	268,550.00
21	NS 21	Supply, Installation, Testing and Commissioning of GI Earthing Strip 50 x 5 mm	Rmt	15.00	175.00	2,625.00
22	NS 22	Supply and Laying of Aluminum Armoured Cable, including necessary fittings for the above motor pumps.				
		50 x 3 1/2 Core	Rmt	100.00	519.00	51,900.00
23	NS 23	Supply and Laying of Aluminum Armoured Cable, including necessary fittings for the above motor pumps.				
		16 x 4 Core	Rmt	50.00	298.00	14,900.00
24	NS 24	Supply and Laying of Aluminum Armoured Cable, including necessary fittings for the above motor pumps.				
		8 x 4 Core	Rmt	50.00	198.00	9,900.00
25	NS 25	Supply, Ertection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonary/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a	a	200mm nominal dia	Rmt	15.00	3,000.00	45,000.00
26	NS 26	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonary/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a	a	150mm nominal dia	Rmt	20.00	2,394.00	47,880.00
b	b	80mm nominal dia	Rmt	10.00	1,191.00	11,910.00

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
27	NS 27	Supply, Installation, testing and commissioning of Non Return Valve CI Double Flanged with Nut, Bolt and Washers etc., as per IS:5312 (SIR/AARKO/LP/KALPNA/KARTAR/ISI Marked)				
a		150 mm nominal dia	No.	3.00	17,647.00	52,941.00
c		80 mm nominal dia	No.	1.00	11,011.00	11,011.00
28	NS 28	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings. (Make : Kirloskar/Zolota/Kartar/Sir)				
a	a	150mm nominal dia	No.	6.00	8,628.00	51,768.00
b	b	80mm nominal dia	No.	1.00	4,048.00	4,048.00
29	NS 29	Supply, Installation, Testing and Commissioning of "Y" Strainer, including Nut, Bolt, Gasket complete in all respects.				
a	a	150mm dia.	No.	1.00	16,582.00	16,582.00
30	NS 30	Supply, Installation, Testing and Commissioning of Pressure Switch	Set	4.00	3,478.00	13,912.00
31	NS 31	Supply, Installation, Testing and Commissioning of Pressure Gauge	Set	4.00	1,135.00	4,540.00
32	NS 32	Supply, Installation, Testing and Commissioning of Pressure Gauge	Set	4.00	1,135.00	4,540.00
		HYDRANT SYSTEM				
33	NS 33	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, ~~cutting the pipes to required size~~				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a	a	150mm nominal dia	Rmt	500.00	2,394.00	1,197,000.00
34	NS 34	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, ~~cutting the pipes to required size~~				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a	a	150mm nominal dia	Rmt	600.00	2,394.00	1,436,400.00
35	NS 35	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings.				
a	a	150mm nominal dia	No.	3.00	8,628.00	25,884.00
36		Supply, Installation, Testing and Commissioning of Fire S/S Fire Brigade inlet Connection (Geetch/Newage/Minimax/Equivalent)	No.	2.00	21,704.00	43,408.00
		AUTOMATIC SPRINKLER SYSTEM				
37	NS 37	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a	a	150mm nominal dia	Rmt	520.00	2,394.00	1,244,880.00
b	b	80mm nominal dia	Rmt	452.00	1,191.00	538,332.00
c	c	65mm nominal dia	Rmt	1550.00	978.00	1,515,900.00
d	d	50mm nominal dia	Rmt	1100.00	803.00	883,300.00
e	e	40mm nominal dia	Rmt	525.00	584.00	306,600.00
f	f	32mm nominal dia	Rmt	525.00	509.00	267,225.00
g	g	25mm nominal dia	Rmt	3785.00	401.00	1,517,785.00
38	NS 38	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		150mm nominal dia	Rmt	25.00	2,394.00	59,850.00
39	NS 39	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings.				
		(Make : Kirolskar/Zolota/Kartar/Sir				
a	a	150mm dia	Nos.	2.00	8,628.00	17,256.00
b	b	80mm dia	Nos.	22.00	4,048.00	89,056.00
40	NS 40	Supply, Fixing, Testing and Commissioning of C.P. Bronze Sprinklers as per IS: 9972, comprises of 15mm dia conventional pattern, 68 deg C. Quartzoid bulb type pendent/upright sprinklers, UL listed. The installation shall be complete as per the drawings.				
a	a	Pendent sprinkler	Nos.	2000.00	586.00	1,172,000.00
41	NS 41	Supply, Fixing, Testing and Commissioning of Cast Iron Box and Brass/Bronze working parts, UL listed installation Control Valve Assembly complete with Hydraulic Alarm Motor and Hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates.				
a	a	150mm dia.	Set	1.00	81,175.00	81,175.00
TOTAL OF FIRE FIGHTING WORKS BOQ FOR NON-DSR ITEMS						15,022,265.69

HVAC WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF HVAC WORKS BOQ
- 3 HVAC BOQ FOR NON DSR ITEMS
- 4 AC ELECTRICAL RELATED BOQ DSR ITEMS
- 5 AC ELECTRICAL RELATED BOQ NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON DSR Rates	Total of DSR and NON DSR works
	SUMMARY OF HVAC WORKS & HVAC RELATED ELECTRICAL WORKS			
A	HVAC WORKS			
1	TOTAL OF NON DSR ITEMS		118,161,583.00	118,161,583.00
	TOTAL OF HVAC WORKS [A]	0.00	118,161,583.00	118,161,583.00
B	HV AC RELATED ELECTRICAL WORKS			
1	CASSETTE AHU CONNECTION	3,412,600.00		3,412,600.00
2	CABLE TRAYS	327,463.00		327,463.00
3	EARTHING	113,070.00		113,070.00
4	MV CABLE LAYING	15,642.50		15,642.50
5	MV CABLE JOINTING AND END TERMAINATION	8,390.00		8,390.00
6	TOTAL OF NON DSR ELECTRICAL ITEMS	0.00	1,680,395.54	1,680,395.54
	TOTAL OF HVAC RELATED ELECTRICAL WORKS [B]	3,877,165.50	1,680,395.54	5,557,561.04
	GRAND TOTAL OF HVAC WORKS [A+B]	3,877,165.50	119,841,978.54	123,719,144.04

		PROJECT: GOLDEN JUBILEE BUILDING, NIT ROURKELA					
SL.N	DSR 2012	Tender Items	Unit	Quantity	Rate	Amount	
O	item no.				Rs.	Rs.	
A		HVAC WORKS BOQ FOR NON DSR ITEMS					
I	I	SECONDARY PUMP					
1	NS1	Supply, installation, testing and commissioning of end suction vertical split casing centrifugal pumps for chilled water recirculation, complete with TEFC squirrel cage motor, love-joy coupling, all mounted on common base plate with necessary accessories. Capacity of pump sets, net head is as given below. All the pumps mentioned below shall also be complete with vibration isolators (spring mounted), mechanical seals, gland drain connections, and shall be suitable for operation on 415 ± 10% Volts, 50 Hz, 3 Phase AC power supply. The efficiency of the pump should not be					
	<u>Note:</u>	Total Static pressure given below is minimum required for the system. Actual static pressure shall be calculated and confirmed by the vendor at the time of bidding.					
	a	1 working & 1 stand by for 1st, 2nd & 3rd floors 25mts.discharge head & 1130Us.gpm	Nos.	2.00	525,000.00	1,050,000.00	
	b	1 working & 1 stand by for 4 th , 5 th , & 6 th floors 25mts.discharge head & 877Us.gpm	Nos.	2.00	575,000.00	1,150,000.00	
	c	1 working & 1 stand by for G.Floor, 7 th , 8 th , 9 th , 10 th , 11 th , 12 th & 13 th floors 25 mts.discharge head & 1130 Us.gpm	Nos.	2.00	725,000.00	1,450,000.00	
2	NS2	VFD for the above, complete in an enclosure with incoming MPCB with accessories like, DP sensor at index circuit (1 Working, 1 redundant) 1 lot.					
		This item shall be considered for all the above pumping stations.					
		Secondary Pump	Nos.	6.00	127,285.00	763,710.00	
		TOTAL OF SECONDARY PUMP				4,413,710.00	
II	II	CHILLED WATER CASSETTE TYPE UNITS AND ACCESSORIES					

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
3	NS3	Supply, installation, testing & commissioning Hydronic Ceiling Cassette type units, each complete with 2 Rows deep chilled water cooling coil, multi blade centrifugal fan, cleanable filters, insulated condensate drain pans with drain pump & drain pump failure alarm, pipe connections through copper pipes, Infraed, remote control, LCD display, 3 fan speed plus auto fan 4 direction air flow, auto swing louver etc. condensate drain connections, with required Set of ball valves with strainers (supply), without strainers (Return), All units shall be suitable for 220 $\pm$ 10%volts, 50 cycles single phase power supply etc. complete as per specification. Note: the remote temperature control / thermostat shall have memory back up for set point re-store. incase of				
a	a	400cfm, 1 Tr	Nos.	1.00	36,000.00	36,000.00
b	b	600 cfm 1.5 Tr	Nos.	156.00	54,000.00	8,424,000.00
c	c	800 cfm, 2 Tr	Nos.	75.00	72,000.00	5,400,000.00
d	d	1000 cfm, 2.5 Tr	Nos.	20.00	90,000.00	1,800,000.00
TOTAL OF CHILLED WATER CASSETTE TYPE UNITS AND ACCESSORIES						15,660,000.00
III	III	FAN COIL UNIT:				
4	NS4	Supply, installation, testing & commissioning of Horizontal Fan coil units, each complete with 3/4 Rows deep chilled water cooling coil, blowers, cleanable filters, main and auxiliary insulated condensate drain pans, casing, coil pipe connections through copper pipes, condensate drain connections, with required Set of ball valves with strainers (supply), without strainers (Return), canvas connections. All fan coil units shall be suitable for 220 $\pm$ 10%volts, 50 cycles single phase power supply etc. complete as per specification.				
a	a	400cfm,1TR	Nos.	1.00	10,000.00	10,000.00
b	b	600cfm,1.5TR	Nos.	1.00	11,500.00	11,500.00
c	c	800cfm,2TR	Nos.	1.00	13,500.00	13,500.00
TOTAL OF FAN COIL UNIT:						35,000.00
IV	IV	AIR HANDLING UNIT:				

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
5	NS5	Supply, installation, testing and commissioning of factory fabricated Double Skin Chilled/Hot Water sectionalized Air-handling unit horizontal type fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts $\pm$ 10%, 50 Hz $\pm$ 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers. The AHU panels shall be insulated with 43 +/- 2 mm thick insulated with CFC free (PUF panel) & 4 3 Kg/m³ density. The motor & blower assembly shall be mounted on Aluminium extruded section only. The fan shall be fitted with factory installed non-invasive airflow monitoring station for flow				
a	a	Lower Ground - Exhibition Hall				
		22000 Cfm, 55 TR, 22 H.P, 70 mm SP	Nos.	1.00	1,980,000.00	1,980,000.00
		8000 Cfm, 20 TR, 12 H.P, 50 mm SP	Nos.	1.00	720,000.00	720,000.00
b	b	Lower Ground - GJB Seminar Hall				
		18000 Cfm, 45 TR, 16 H.P, 50 mm SP	Nos.	1.00	1,620,000.00	1,620,000.00
		12000 Cfm, 30 TR, 12 H.P, 50 mm SP	Nos.	1.00	1,080,000.00	1,080,000.00
c	c	Lower Ground - Reception				
		6000 Cfm, 15 TR, 5.5 H.P, 50 mm SP	Nos.	1.00	540,000.00	540,000.00
d	d	First, Second & Third Floor - Library & Corridor				
		22000 Cfm, 55 TR, 22 H.P, 70 mm SP	Nos.	6.00	1,980,000.00	11,880,000.00
e	e	Fourth Floor- Corridor and Lobby				
		14000 Cfm, 35 TR, 14 H.P, 50 mm SP	Nos.	1.00	1,260,000.00	1,260,000.00
f	f	Fifth Floor- Corridor and Lobby				
		14000 Cfm, 35 TR, 14 H.P, 50 mm SP	Nos.	1.00	1,260,000.00	1,260,000.00
g	g	Sixth Floor- Corridor and Lobby				
		12000 Cfm, 30 TR, 12 H.P, 50 mm SP	Nos.	1.00	1,080,000.00	1,080,000.00
h	h	Fourth to Seventh (Office Areas)				

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		10000 Cfm, 25 TR, 7.5 H.P, 50 mm SP	Nos.	1.00	900,000.00	900,000.00
		4000 Cfm, 10 TR, 5.5 H.P, 50 mm SP	Nos.	1.00	360,000.00	360,000.00
g	g	Optional item				
		3000 Cfm, 7.5 TR, 5.5 H.P, 50 mm SP	Nos.	1.00	270,000.00	270,000.00
		2000 Cfm, 5.5 TR, 3.7 H.P, 50 mm SP	Nos.	1.00	180,000.00	180,000.00
6	6	Ceiling Suspended AIR HANDLING UNITS				
		Ground Floor - Entrance Lobby				
a	a	16 TR, 6400 Cfm, 7.5 H.P, 40 mm SP	Nos.	1.00	576,000.00	576,000.00
		Optional items for replacing cassettes				
b	b	12TR, 5000 Cfm, 7.5 H.P, 40 mm SP	Nos.	1.00	450,000.00	450,000.00
c	c	10TR, 4000 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	360,000.00	360,000.00
d	d	8.5TR, 3400 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	306,000.00	306,000.00
e	e	7.5TR, 3000 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	270,000.00	270,000.00
f	f	5.5TR, 2200 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	198,000.00	198,000.00
7	NS7	AIR HANDLING UNITS TFA				
		Supply, installation, testing and commissioning of factory fabricated Double Skin Chilled/Hot Water sectionalized Air-handling unit horizontal type fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts $\pm$ 10%, 50 Hz $\pm$ 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers. The AHU panels shall be insulated with 43 +/- 2 mm thick insulated with CFC free (PUF panel) & 43 Kg/m³ density.. The motor & blower assembly shall be mounted on Aluminium extruded section only. Self adhesive coated neoprene gasket to be provided between panels and structure of the				
a	a	Fourth & Fifth Floor				
		3400 Cfm, 8.5 TR, 40 mm Sp	Nos.	2.00	306,000.00	612,000.00
b	b	Sixth Floor				
		3000 Cfm, 7.5 TR, 40 mm Sp	Nos.	1.00	270,000.00	270,000.00
c	c	Above thirteenth floor Roof for core-1 .				
		10000 Cfm, 22 TR, 40 mm Sp	Nos.	1.00	900,000.00	900,000.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
TOTAL OF AIR HANDLING UNIT:						27,072,000.00
V	V	CHILLED WATER PIPING & INSULATION				
8	NS8	Supplying, laying, fixing, testing & commissioning MS class 'C' pipes. For fixing valves, strainers and accessories pipes cut to required length with necessary, clamps, supports, antivibration pads, hangers, fittings such as bends, tees, reducers, flange				
a	a	350 mm dia MS pipes	Rmt	10.00	3,300.00	33,000.00
b	b	300 mm dia MS pipes	Rmt	90.00	2,750.00	247,500.00
c	c	250 mm dia MS pipes	Rmt	180.00	2,500.00	450,000.00
d	d	200 mm dia MS pipes	Rmt	220.00	2,350.00	517,000.00
e	e	150 mm dia MS pipes	Rmt	200.00	2,075.00	415,000.00
f	f	125 mm dia MS pipes	Rmt	500.00	2,000.00	1,000,000.00
g	g	100 mm dia MS pipes	Rmt	520.00	1,800.00	936,000.00
h	h	80 mm dia MS pipes	Rmt	530.00	1,550.00	821,500.00
i	i	65 mm dia MS pipes	Rmt	660.00	1,300.00	858,000.00
j	j	50 mm dia MS pipes	Rmt	980.00	975.00	955,500.00
k	k	40 mm dia MS pipes	Rmt	250.00	850.00	212,500.00
l	l	32 mm dia MS pipes	Rmt	210.00	700.00	147,000.00
m	m	25 mm dia MS pipes	Rmt	2,800.00	625.00	1,750,000.00
9	NS9	Supply and erection of butterfly valves as per the specifications. The valves shall be as per BS6755 part -1 for leak rate. The valve seat material shall be with nitrile rubber NON- Corrosive type. (PN-16 rated)				
a	a	200 mm dia	Nos	12.00	16,000.00	192,000.00
b	b	150 mm dia	Nos	12.00	9,505.00	114,060.00
c	c	125 mm dia	Nos	24.00	6,500.00	156,000.00
d	d	100 mm dia	Nos	45.00	5,500.00	247,500.00
e	e	80 mm dia	Nos	32.00	4,000.00	128,000.00
f	f	65 mm dia	Nos	20.00	3,650.00	73,000.00
g	g	50 mm dia	Nos	55.00	3,250.00	178,750.00
h	h	40 mm dia	Nos	25.00	3,175.00	79,375.00
i	i	32 dia butter fly valve	Nos	20.00	2,900.00	58,000.00
j	j	25 dia ball valve (Cassette units & AHU Drain)with Y-strainer.	Nos	320.00	3,500.00	1,120,000.00
k	k	25 dia ball valve with y-strainer	Nos	285.00	2,500.00	712,500.00
10	NS10	Y- strainers of approved make of following size as per the specifications with bronze / SS mesh flanged end connection. (PN-16 rated)				
a	a	200 mm dia	Nos	6.00	24,455.00	146,730.00
b	b	150 mm dia	Nos	6.00	14,970.00	89,820.00
c	c	125 mm dia	Nos	1.00	12,905.00	12,905.00
d	d	100 mm dia	Nos	25.00	10,885.00	272,125.00
e	e	80 mm dia	Nos	15.00	8,290.00	124,350.00
f	f	65 mm dia	Nos	5.00	5,750.00	28,750.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
g	g	50 mm dia	Nos	6.00	4,795.00	28,770.00
h	h	40 mm dia	Nos	5.00	3,415.00	17,075.00
i	i	32 mm dia	Nos	1.00	2,635.00	2,635.00
11	NS11	Manual Balancing valves of approved make as per the specifications with flanged connections. The valve shall be of PN 16 rating and shall with stand to a pressure of 16 BAR as per the specifications.				
a	a	200 mm dia	Nos	1.00	99,500.00	99,500.00
b	b	150 mm dia	Nos	1.00	50,250.00	50,250.00
c	c	125 mm dia	Nos	12.00	34,000.00	408,000.00
d	d	100 mm dia	Nos	5.00	25,000.00	125,000.00
e	e	80 mm dia	Nos	5.00	15,400.00	77,000.00
f	f	65 mm dia	Nos	8.00	14,225.00	113,800.00
g	g	50 mm dia	Nos	20.00	9,850.00	197,000.00
h	h	40 mm dia	Nos	1.00	6,100.00	6,100.00
i	i	32 mm dia	Nos	1.00	4,911.00	4,911.00
j	j	25 mm dia	Nos	1.00	3,950.00	3,950.00
11.1	NS 11.1	Supply, Installation, testing and commissioning of 2 way control valves ON OFF type for AHU Chilled water out lets with necessary flanges, power control module with complete control wiring. (If BMS interfacing is not required)				
a	a	100 mm dia	Nos	1.00	43,775.00	43,775.00
b	b	80 mm dia	Nos	1.00	50,000.00	50,000.00
c	c	65 mm dia	Nos	1.00	50,000.00	50,000.00
d	d	50 mm dia	Nos	1.00	50,000.00	50,000.00
e	e	40 mm dia	Nos	1.00	32,792.00	32,792.00
f	f	32 mm dia	Nos	1.00	31,345.00	31,345.00
g	g	25 mm dia	Nos	1.00	22,950.00	22,950.00
12	NS12	Self Dynamic balancing valves				

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		Supply, Installation, testing and commissioning of electronic, Self-balancing, Pressure independent type dynamic balancing Valve with integrated 2 way modulating Control valves in a single body. The valves accept 2-10V DC or 4-20 ma and shall be capable of providing 4-20 ma 2-10V DC flow feedback signal to the control system. Each valve should have 39(for dia below 40mm & flow upto 22GPM) & 51 (for dia. above 25 mm size & flow more than 22 GPM) adjustable maximum flow rate setting to enable flow limitation and balancing to the coil or zones that the valves are controlling. all actuators shall be microprocessor based with a self-calibrating feature. The actuator shall be capable of accepting 2-10V DC, 4-20 ma electric signal. The valve actuator shall be equipped to provide actual flow feedback signal to the BMS/control system. The flow feedback provision shall be permanently available on the actuator. The minimum close off pressure of actuator must be 1.5 times shut off head of pump				
a	a	100 mm dia (117 USGPM,143 USGPM)	Nos	8.00	69,000.00	552,000.00
b	b	80 mm dia (91 US GPM, 78 USGPM)	Nos	4.00	50,000.00	200,000.00
c	c	65 mm dia (70.2 USGPM)	Nos	1.00	50,000.00	50,000.00
d	d	50 mm dia (52 USGPM, 41.6 USGPM, 39 USGPM)	Nos	2.00	50,000.00	100,000.00
e	e	40 mm dia (22.1 USGPM, 19.5 USGPM)	Nos	3.00	35,000.00	105,000.00
f	f	32 mm dia	Nos	1.00	35,000.00	35,000.00
g	g	25 mm dia (2.4 USGPM upto 6 USGPM)	Nos	250.00	35,000.00	8,750,000.00
13	NS13	Supply and Installation of Auto air Purge Valve of following sizes				
a	a	20 mm dia	Nos	528.00	900.00	475,200.00
14	NS14	Metallic flexible rubber bellows on the out let and inlet of the pumps with necessary hardware as per the specifications of following sizes.				
a	a	200 mm dia	Nos	6.00	13,705.00	82,230.00
b	b	150 mm dia	Nos	4.00	12,110.00	48,440.00
c	c	100 mm dia	Nos	2.00	10,520.00	21,040.00
15	NS15	Non return valves, dual plate wafer type as per the specifications of following sizes: PN-16 rated)				
a	a	200 mm dia	Nos	3.00	23,545.00	70,635.00
b	b	150 mm dia	Nos	6.00	22,230.00	133,380.00
d	d	100 mm dia	Nos	2.00	18,925.00	37,850.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
16	NS16	Supply and Installation of Dial type Pressure gauge with ball valve, calibrated in metric & British units				
a	a	100 mm Dial - 0 to 10 kg/cm2	Nos	50.00	900.00	45,000.00
17	NS17	Providing and fixing in position Mercury in glass thermometers with V groove for protection				
a	a	100 mm Dial	Nos	50.00	350.00	17,500.00
		INSULATION CHILLED WATER				
18	NS18	Piping insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
a	a	300 mm dia	Rmt	90.00	2,500.00	225,000.00
b	b	250 mm dia	Rmt	180.00	2,035.00	366,300.00
c	c	200 mm dia	Rmt	220.00	1,750.00	385,000.00
d	d	150 mm dia	Rmt	200.00	1,350.00	270,000.00
e	e	125 mm dia	Rmt	500.00	1,150.00	575,000.00
f	f	100 mm dia	Rmt	520.00	980.00	509,600.00
g	g	80 mm dia	Rmt	530.00	800.00	424,000.00
h	h	65 mm dia	Rmt	660.00	650.00	429,000.00
i	i	50 mm dia	Rmt	980.00	550.00	539,000.00
j	j	40 mm dia	Rmt	250.00	485.00	121,250.00
k	k	32 mm dia	Rmt	210.00	450.00	94,500.00
l	l	25 mm dia	Rmt	2,800.00	410.00	1,148,000.00
19	NS19	Butterfly Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	12.00	1,890.00	22,680.00
b	b	150 mm dia	Nos	12.00	1,470.00	17,640.00
c	c	125 mm dia	Nos	24.00	1,205.00	28,920.00
d	d	100 mm dia	Nos	45.00	1,035.00	46,575.00
e	e	80 mm dia	Nos	32.00	845.00	27,040.00
f	f	65 mm dia	Nos	20.00	725.00	14,500.00
g	g	50 mm dia	Nos	55.00	590.00	32,450.00
h	h	40 mm dia	Nos	25.00	530.00	13,250.00
i	i	32 dia ball valve	Nos	20.00	490.00	9,800.00
j	j	25 dia ball valve	Nos	320.00	445.00	142,400.00
k	k	25 dia ball valve with ystrainer	Nos	285.00	445.00	126,825.00
20	NS20	Y Strainer insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	6.00	1,890.00	11,340.00
b	b	150 mm dia	Nos	6.00	1,470.00	8,820.00
c	c	125 mm dia	Nos	1.00	1,205.00	1,205.00
d	d	100 mm dia	Nos	25.00	1,035.00	25,875.00
e	e	80 mm dia	Nos	15.00	845.00	12,675.00
f	f	65 mm dia	Nos	5.00	725.00	3,625.00
g	g	50 mm dia	Nos	6.00	590.00	3,540.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
h	h	40 mm dia	Nos	5.00	530.00	2,650.00
i	i	32 mm dia	Nos	1.00	490.00	490.00
21	NS21	Manual Balancing Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	1.00	1,890.00	1,890.00
b	b	150 mm dia	Nos	1.00	1,470.00	1,470.00
c	c	125 mm dia	Nos	12.00	1,205.00	14,460.00
d	d	100 mm dia	Nos	13.00	1,035.00	13,455.00
e	e	80 mm dia	Nos	9.00	845.00	7,605.00
f	f	65 mm dia	Nos	9.00	725.00	6,525.00
g	g	50 mm dia	Nos	22.00	590.00	12,980.00
h	h	40 mm dia	Nos	3.00	530.00	1,590.00
i	i	32 mm dia	Nos	1.00	490.00	490.00
j	j	25 mm dia	Nos	250.00	445.00	111,250.00
21.1	NS 21.1	2 way control valves insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	100 mm dia	Nos	8.00	1,035.00	8,280.00
b	b	80 mm dia	Nos	4.00	845.00	3,380.00
c	c	65 mm dia	Nos	1.00	725.00	725.00
d	d	50 mm dia	Nos	2.00	590.00	1,180.00
e	e	40 mm dia	Nos	3.00	530.00	1,590.00
f	f	32 mm dia	Nos	1.00	490.00	490.00
g	g	25 mm dia	Nos	250.00	445.00	111,250.00
22	NS22	Pressure independent type dynamic balancing Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	100 mm dia	Nos	8.00	1,035.00	8,280.00
b	b	80 mm dia	Nos	4.00	845.00	3,380.00
c	c	65 mm dia	Nos	1.00	725.00	725.00
d	d	50 mm dia	Nos	2.00	590.00	1,180.00
e	e	40 mm dia	Nos	3.00	530.00	1,590.00
f	f	32 mm dia	Nos	1.00	490.00	490.00
g	g	25 mm dia	Nos	250.00	445.00	111,250.00
23	NS23	NRV insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	3.00	1,890.00	5,670.00
b	b	150 mm dia	Nos	1.00	1,470.00	1,470.00
c	c	125 mm dia	Nos	1.00	1,205.00	1,205.00
d	d	100 mm dia	Nos	1.00	1,035.00	1,035.00
e	e	80 mm dia	Nos	1.00	845.00	845.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
24	NS24	Supply and Installation of PVC Pipe (4kg) for AHU Drain & Fresh air connection for Cassette units of the following sizes				
a	a	50 mm dia	Rmt	800.00	1,100.00	880,000.00
b	b	40 mm dia	Rmt	200.00	900.00	180,000.00
c	c	32 mm dia	Rmt	500.00	800.00	400,000.00
d	d	25 mm dia	Rmt	800.00	600.00	480,000.00
	NS 24.1	Supply & insulation with Nitral rubber insulation of 32mm thick	Sq.mt	100.00	2,500.00	250,000.00
TOTAL OF CHILLED WATER PIPING & INSULATION						32,479,673.00
VI	VI	SHEET METAL DUCT:				
25	NS25					
		Supplying, fabricating, installing and testing of factory fabricated sheet metal ducting complete as per SMACNA with splitter damper, duct damper, vanes etc. as per specifications and approved shop drawing complete as required. (Galvanized sheet steel of 120gsm)				
		Air-conditioning Ducting :				
a	a	26 SWG	Sqmt	3,800.00	550.00	2,090,000.00
b	b	24 SWG	Sqmt	3,500.00	650.00	2,275,000.00
c	c	22 SWG	Sqmt	2,300.00	750.00	1,725,000.00
d	d	20 SWG	Sqmt	1,520.00	850.00	1,292,000.00
	e	18 SWG	Sqmt	100.00	1,000.00	100,000.00
TOTAL OF SHEET METAL DUCT:						7,482,000.00
VII	VII	DIFFUSER, GRILLES, DAMPERS				
26	NS26	Supply Air Diffuser				
		Supplying, fixing and balancing of powder coated Aluminium square supply air diffusers, air distribution grid for straightening the air flow through the collar and register and removable key-operated volume control dampers. Complete as per specification and drawing	Nos	260.00	3,300.00	858,000.00
		SA DIFFUSER (450x 450)				
27	NS27	Return Air Diffuser				
		Supplying & fixing of square return air diffusers, air distribution grid for straightening the air flow through the collar and register without volume control dampers. Powder Coated Aluminium square diffuser without volume control damper	Nos	260.00	2,045.00	531,700.00
		RA DIFFUSER (450x 450)				
28	NS28	Jet Diffuser				

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		Supplying, fixing and balancing of powder coated Aluminium jet diffusers, air distribution grid for straightening the air flow removable key-operated volume control dampers. Complete as per specification and drawing (Air master or equivalent make)	Nos	30.00	7,000.00	210,000.00
		Jet Diffuser (Dia 300)	Nos	40.00	6,500.00	260,000.00
		Jet Diffuser (Dia 250)				
29	NS29	Supply and installation of G I Butterfly damper as per specification				
a	a	250 mm dia	Nos	5.00	770.00	3,850.00
b	b	200 mm dia	Nos	260.00	560.00	145,600.00
c	c	150 mm dia	Nos	200.00	480.00	96,000.00
30	NS30	Linear Grills:				
		Supplying, installing, testing and balancing of Powder Coated Aluminium continous linear air grilles (Linear/single) without volume control damper of various sizes.				
a	a	150 mm wide	Sqmt	200.00	15,000.00	3,000,000.00
31	NS31	Supplying, installing, and testing of GI volume control damper within ducts to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per approved shop drawing	Sqmt	70.00	5,500.00	385,000.00
32	NS32	Supply, installation & testing of AMCA certified & UL listed motorized smoke cum fire dampers of at least 90 minute fire rating and as per the specifications as detailed earlier in the relevant sections. The fire dampers shall be located in the supply/return air ducts/walls, at all fire rated crossovers (shaft/walls etc.).	Sqmt	40.00	30,000.00	1,200,000.00
33	NS33	Supplying, installing, testing and commissioning of fusible link shut off type fire dampers with thermal release mechanism as per approved drawings and specifications.	Sqmt	1.00	9,000.00	9,000.00
34	NS34	Acoustic insulation of ducting with 25 mm thick fibreglass of crown 150 with 28G perforated aluminium sheet as per specs.	Sqmt	2,000.00	450.00	900,000.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
35	NS35	Supplying, installing of external thermal insulation on ducts with approved sample of closed cell insulation class "O" rating, prelaminated with aluminium foil & density complete as per specifications.				
a	i	19mm thick insulation.	Sqmt	4,000.00	1,600.00	6,400,000.00
36	NS36	Acoustic insulation of rooms with 50 mm thick 32kg/cum density fibre glass with 24G perforated G.I sheet and frame work as per specifications.	Sqmt	500.00	1,115.00	557,500.00
37	NS37	Insulated flexible duct for supply air diffuser. Ducts to be hung stretched and not left sagging.				
a	a	250 mm dia	Rmt	10.00	550.00	5,500.00
b	b	200 mm dia	Rmt	500.00	500.00	250,000.00
c	c	150 mm dia	Rmt	520.00	475.00	247,000.00
38	NS38	Supply & Erection of Mixing box . Mixing Boxes to have projected notch for firmly fixing the diffuser. Supports to be included.	Nos	240.00	1,215.00	291,600.00
39	NS 38.1	Roof Exposed Insulation:				
		Supply,Instalation, testing and commissioning of 70 mm thick XPS Insulation having density of 32kg	Sqmt	3500.00	1,200.00	4,200,000.00
40	NS.38.2	Supply, fixing & testing of Acoustic silencers in return air passage within AHU rooms capable of noise reduction by 10db				
		22G GSS with 50/100mm thk acoustic lining in acoustic silencers	Sqmt	20.00	1,000.00	20,000.00
41	NS39	Factory fabricated, powder coated Double skin AHU construction plenum with acoustic Insulation of 50mm thick rigid fibreglass of 48kg/Cum density covered with RP tissue and 22G Al. Perforated Sheet. Appropriate Cutout to be made to connect the branch duct.	Sqmt	250.00	5,705.00	1,426,250.00
		Air Measuring Stations				
42	NS.39.1	Supplying, installing, testing and commissioning of air measuring stations in each AHU room for fresh air comprising factory built honeycomb air straightener, volume control damper with 230/24 Volts modulating actuator, air pressure pickups and factory calibrated controller	Nos	25.00	125,000.00	3,125,000.00
TOTAL OF DIFFUSER, GRILLES, DAMPERS , Roof insulation & Air Measring stations.						24,122,000.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
VIII	VIII	TOILET EXHAUST				
40	NS40	Supply,installation,testing & comissioning of UL listed belt drive SISW centrifugal backward inclined type fan with weather hood. The fans shall be AMCA certified for air performance. The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall be suitable for outdoor application.				
		15,600 cfm, 45mm SP,	Nos	1.00	780,000.00	780,000.00
41	NS41	2,500cfm, 45mm SP,	Nos	1.00	145,000.00	145,000.00
42	NS42	AMCA certified (for air performance & sound) inline exhaust fans - Supply, installation, testing and commissioning of Wall mounted / Duct Inline exhaust fans.				
		1000 CFM - (Toilet)	Nos	4.00	28,000.00	112,000.00
TOTAL OF TOILET EXHAUST						1,037,000.00
IX	IX	STAIR CASE PRESSURISATION UNITS				
43	NS43	Supply,installation,testing & comissioning of UL listed belt drive SISW centrifugal backward inclined type fan with weather hood. The fans shall be AMCA certified for air performance. The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall be suitable for outdoor application.The Fan assembly shall be capable of handling 14000 CFM air at static pressure of 45mm WC. (fire rate is 4 hrs.@260 'C)	Nos	1.00	710,000.00	710,000.00

SL.N O	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
44	NS44	Supply,installation,testing & comissioning of UL listed belt drive SISW centrifugal backward inclined type fan with weather hood. The fans shall be AMCA certified for air performance. The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall be suitable for outdoor application.The Fan assembly shall be capable of handling 7000 CFM air at static pressure of 45mm WC. (fire rate is 4 hrs.@260 'C)	Nos	2.00	350,000.00	700,000.00
STAIR CASE PRESSURISATION UNITS						1,410,000.00
X	X	AIR OZONE SYSTEM:				
45	NS45	Supply, Installation , testing , commissioning and handing over of the imported Air Ozone System (UL Listed for smoke & fire - UL 2043) for maintaining indoor Air Quality. The components of the system must be in strict conformity with the specifications.and shall be including freight from Airport to site ,Insurance,Lifting,Shifting etc.as required . Single phase power supply for the Ozone Generators will be provided near the controller by others. The prices to include all connected wiring between the duct mounted ozone generator, VOC sensor / Controller. The power supply to the Ozone monitor will be provided near the respective equipment by others . But the wiring between the ozone monitor / switch and controller will be included in the scope				
		Duct mounted ozone generators suitable for the following floor area mentioned in the basis of design .				
		Ground Floor				
b)		Exhibition Hall - 22000 CFM & 8000 CFM	SET	1.00	1,154,200.00	1,154,200.00
c)		Seminar Hall - 18000 CFM & 12000 CFM	SET	1.00	824,000.00	824,000.00
		First Floor				
d)		Librarury - 22000 CFM	SET	1.00	824,000.00	824,000.00
e)		Second Floor				
f)		Librarury - 22000 CFM	SET	1.00	824,000.00	824,000.00
		Third Floor				
		Librarury - 22000 CFM	SET	1.00	824,000.00	824,000.00
AIR OZONE SYSTEM						4,450,200.00
TOTAL OF NON DSR HVAC WORKS						118,161,583.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
B		HVAC RELATED ELECTRICAL WORKS BOQ FOR DSR ITEMS				
		For CASSETTE AHU connection from starter panel unit wiring.				
1		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				
	1.14.7	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	Rmt	50	204.00	10,200.00
	1.14.8	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Rmt	4,000	268.00	1,072,000.00
	1.14.9	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Rmt	5,000	358.00	1,790,000.00
	1.14.10	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	Rmt	400	562.00	224,800.00
	1.14.11	4 X 16 sq. mm + 2 X 16 sq. mm earth wire	Rmt	400	789.00	315,600.00
TOTAL OF CASSETTE AHU CONNECTION						3,412,600.00
		CABLE TRAYS				
2	4.1	Supplying, installing following size of perforated pre- painted M.S cable trays with perforation not more than 17.5%, in convenient section, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders				
a	4.1.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	200	405.00	81,000.00
b	4.1.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	135	464.00	62,640.00
c	4.1.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	10	570.00	5,700.00
d	4.1.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	10	677.00	6,770.00
e	4.1.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	10	974.00	9,740.00
f	4.1.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	10	1,210.00	12,100.00
g	4.1.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	10	1,475.00	14,750.00
3	4.2	Supplying, installing following size of perforated pre- painted M.S cable trays bends with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.2.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	2	678.00	1,356.00
b	4.2.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	4	790.00	3,160.00
c	4.2.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	10	989.00	9,890.00
d	4.2.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	10	1,197.00	11,970.00
e	4.2.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	10	1,751.00	17,510.00
f	4.2.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	10	2,196.00	21,960.00
g	4.2.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	10	2,700.00	27,000.00
4	4.4	Supplying, installing following size of perforated pre- painted M.S cable trays Tee's with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
a	4.4.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	5	1,195.00	5,975.00
b	4.4.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	2	1,408.00	2,816.00
c	4.4.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	2.00	1,822.00	3,644.00
d	4.4.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	2.00	2,228.00	4,456.00
e	4.4.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	2.00	3,282.00	6,564.00
f	4.4.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	2.00	4,143.00	8,286.00
g	4.4.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	2.00	5,088.00	10,176.00
CABLE TRAYS						327,463.00
EARTHING						
5.1	5.2	Earthing with G.I. earth pipe 4.5mtrs long, 40mm dia including accessones, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal and salt as required.	Set	10	3,385.00	33,850.00
5.2	5.9	Supplying and laying 25 mm X 5 mm GI strip at 0.50 Rmt below ground as strip earth electrode, including connection / terminating with nut , bolt,spring ,washer etc. as required (jointing shall be done by overlapping and with 2 sets of GI nutbolt & spring washer spaced at 50mm).	Rmt	200	97.50	19,500.00
5.3	5.12	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with GI thimble excavation and re-filling as required.	Rmt	220	131.00	28,820.00
5.4	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Rmt	100	120.00	12,000.00
5.5	5.16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Rmt	500	30.00	15,000.00
5.6	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or In recess for loop earthing along with existing surface/recessed conduit/submain wiring/cable as required.	Rmt	200	19.50	3,900.00
TOTAL OF EARTHING						113,070.00
MV CABLE LAYING						
7.1	7.8	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
a	7.8.1	Upto 35 sq.mm (Clamped with 1mm thick saddle)	mtr	900	16.50	14,850.00
b	7.8.2	Above 35sq.mm and upto 95sq.mm (Clamped with 25x3mm MS Flat clamp)	mtr	5.00	38.50	192.50

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
c	7.8.3	Above 95sq.mm and upto 185sq.mm(Clamped with 25/40x3mm MS Flat clamp)	mtr	5.00	47.50	237.50
d	7.8.4	Above 185sq.mm and upto 400sq.mm (Clamped with 40x3mm MS Flat clamp)	mtr	5.00	72.50	362.50
TOTAL OF MV CABLE LAYING						15,642.50
MV CABLE JOINTING AND END TERMAINATION						
8.1	9.1	Supplying and making end termination with brass compression gland and aluminium lugs forfollowing size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
b	9.1.21	3 .5 X 35 sq. mm (32mm)	Each	10.00	223.00	2,230.00
m	9.1.34	4 X 25 sq. mm (28mm)	Each	26	192.00	4,992.00
o	9.1.32	4 X 10sq. mm (25mm)	Each	8.00	146.00	1,168.00
MV CABLE JOINTING AND END TERMAINATION						8,390.00
TOTAL OF HVAC RELATED ELECTRICAL WORKS BOQ FOR DSR ITEMS						3,877,165.50

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
B		HVAC RELATED ELECTRICAL WORKS BOQ FOR NON DSR ITEMS				
1	NS1	Design, Supply, Installation, testing and commissioning of 415V VFD with by pass Star-delta starters Panels as per Schematic drg and specifications				
a	a	Cost of Material cum panel (7.5 kW)	Nos	3	94,843.00	284,529.00
b	b	Cost of Material cum panel (3.7 kW)	Nos	2	72,747.48	145,494.96
c	c	Cost of Material cum panel (5.5kW)	Nos	3	80,112.68	240,338.04
d	d	Cost of Material cum panel (9.3kW)	Nos	7	109,573.47	767,014.30
2	NS2	Design, Supply, Installation, testing and commissioning of 415V DOL starters Panels as per Schematic drg and specifications				
a	a	Cost of Material cum panel (5.5kW)	Nos	1	28,556.29	28,556.29
b	b	Cost of Material cum panel (2.0 kW)	Nos	3	24,137.18	72,411.53
3	NS3	Supply, Commissioning of power cables of 1100V grade XLPE aluminium or copper armoured cable as per specification.				
a	a	3.5 Core x 35 sq.mm AL AYFY				
		SUPPLY	Rmt	50	214.71	10,735.26
b	b	4 Core x 25 sq.mm AL AYFY				
		SUPPLY	Rmt	150	169.93	25,489.88
c	c	4 Core x 16 sq.mm AL AYFY				
		SUPPLY	Rmt	800	132.28	105,826.27
TOTAL COST OF HVAC RELATED ELECTRICAL WORKS FOR NON DSR ITEMS						1,680,395.54

CONSTRUCTION OF LECTURE HALL COMPLEX (PHASE-II) AT N.I.T. ROURKELA			
ABSTRACT OF COST			
	DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
1	CIVIL WORKS	174040218.84	97866770.46
2	PLUMBING WORKS	2597076.85	5574845.17
3	ELECTRICAL WORKS	9126330.50	23533140.00
4	FIRE FIGHTING WORKS	89893.00	8407459.00
5	HVAC	688759.00	58284145.00
6	SOLAR ENERGY	-	3500000.00
7	FDA	-	4828320.00
	SUB TOTAL	186542278.19	201994679.64
G.TOTAL		388536957.82	

<u>CONSTRUCTION OF LECTURE HALL COMPLEX (PHASE-II) AT N.I.T. ROURKELA</u>			
CIVIL WORKS			
<u>SUMMARY OF COST</u>			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012 items	Non Scheduled items
I	EARTH WORK	1561172.44	
II	CONCRETE WORK	2845003.39	
III	REINFORCED CEMENT CONCRETE	121695493.77	
IV	BRICK WORK	10019211.30	
V	STONE WORK	9023730.50	
VI	MARBLE WORK	1322496.58	
VII	WOOD WORK	227161.25	
VIII	STEEL WORK	506900.64	
IX	FLOORING	16495789.13	
X	ROOFING	1485468.61	
XI	FINISHING	6010690.60	
XII	ROAD WORK	151995.60	
XIII	DRAINAGE	28404.35	
XIV	ALUMINIUM WORK	31108.07	
XV	WATER PROOFING	2635592.61	
XVI	NON SCHEDULE ITEMS	-	97866770.46
	TOTAL	174040218.84	97866770.46
		A-1	A-2

PROPOSED LECTURE HALL COMPLEX

BILL OF QUANTITIES

CIVIL WORKS

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
I EARTH WORK 2.0						
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as per as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cu.M	6612.79	129.35	855364.45
2	2.7	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed`				
	2.7.1	Ordinary Rock	Cu.M	661.28	197.75	130768.12
3	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 Sq.M on plan) including dressing of sides and ramming ob bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, withen a lead of 50m.				
	2.8.1	All kinds of soil	Cu.M	98.03	130.80	12822.32
4	2.9	Excavation work by mechanical means (Hydraulic excavatory)/manual means in foundation trenches or drains not exceeding 1.5m in width or 10 Sq.M on plan including dressing of sides and ramming or bottoms lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.				
	2.9.1	Ordinary Rock	Cu.M	9.80	212.00	2078.27
5	2.24.1	In or under water and/or liquid mud, includig pumping out water as required.	metre denth	3.20	25.87	82.78
6	2.24.2	In or under foul position,including pumping out water as required.	metre depth	3.20	32.34	103.49
7	2.25	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 up to 1.5 m.	Cu.M	4844.30	83.80	405952.34
8	2.26	Extra for every additional lift of 1.5 m or part thereof in:				
	2.26.1	All kinds of soil.				
	(i)	1.5m to 3.00m	Cu.M	1045.25	34.60	36165.65
	(ii)	3.00m to 4.50m	Cu.M	1045.25	62.00	64805.50
9		DELETED				
10	2.28	Surface dressing of the ground including removing vegetation and in equalities not exceding 15cm dep and disposal of rubbish, lead upto 50m and lift upto 1.5m.				
	2.28.1	All kinds of soil.	100 Sq.M	53.92	935.25	50428.68
11	2.32	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	100 Sq.M	38.69	247.00	9556.43
13	2.36	Deduct for disposed soil levelled and neatly dressed.	Cu.M	430.00	-25.35	-10900.50
14	2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site, including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	Cu.M	22.00	110.75	2436.50
15	2.38	Filling with available fly ash and earth (excluding rock) in trenches or embankment in layers (each layer should not exceed 15 cm), with intermediate layer of compacted earth (Soil density of 98%) after every four layers of compacted depth of fly ash, sides & top layer of filling shall be done with earth having total minimum compacted thickness 30 cm or as decided by Engineer -in-charge, including compacting each layer by rolling/ ramming and watering, all complete as per drawing and direction of Engineer -in - charge	Cu.M	18.00	83.80	1508.40
				TOTAL		1561172.44
				TOTAL [I]		1561172.44

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
II CONCRETE WORK 4.0						
16	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level.				
	4.1.8	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cu.M	752.10	3593.30	2702520.93
17	4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapet, coping, bed blocks, anchor blocks.				
(i)	4.2.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cu.M	4.25	5272.40	22425.57
(ii)	4.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Cu.M	3.96	4782.35	18917.47
18	4.10	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)	Sq.M	70.21	207.55	14572.64
19	4.12	Extra for providing and mixing water proofing material Impermo or equivalent in cement concrete work @ 1 kg per 50 kg of cement	per 50 kg cement	18.26	35.35	645.32
20	4.13	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	Sq.M	70.21	96.65	6786.06
21	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth	Sq.M	233.61	338.75	79135.39
					TOTAL	2845003.39
				TOTAL [II]		2845003.39
III REINFORCED CEMENT CONCRETE 5.0						
22	5.2	Reinforced cement concrete work in wall (any thickness) including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutment, posts and struts etc, up to floor five level excluding cost of centering, shuttering finishing and reinforcement.				
	5.2.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	Cum	65.00	5735.75	372823.75
23	5.9	Centring and shuttering including strutting, propping etc. and removal of form for:				
i	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sq.M	1035.11	166.90	172760.47
ii	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sq.M	4892.82	285.15	1395188.19
iii	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sq.M	12066.22	311.20	3755007.88
iv	5.9.5	Lintels, beams, plinth beams, girders, buttresses and cantilevers.	Sq.M	11019.23	262.25	2889792.12
v	5.9.6	Columns, pillars, piers, abutments, posts and struts	Sq.M	7412.56	365.60	2710032.67
vi	5.9.7	Stairs, (excluding landings) except spiral staircases	Sq.M	562.05	326.30	183397.57
vii	5.9.14	Extra for shuttering in circular work (20% of respective centring and shuttering items)				
	(a)	For Foundation [Rate=20% of 119.25=23.85]	Sq.M	917.25	33.38	30617.71
	(b)	Curved for Walls [Rate 20% of 180.40=36.08]	Sq.M	3471.24	57.03	197964.93
	(c)	For Circular Slabs [Rate 20% of 187.35=37.47]	Sq.M	12066.22	62.24	751001.58
	(d)	For Curved Beams [Rate 20% of 162.65=32.53]	Sq.M	3834.63	52.45	201126.50
	(e)	Circular sides [20% of 61.10=12.22]	Sq.M	2125.03	12.22	25967.85
	(f)	Circular Columns [20% of 238.40=12.22]	Sq.M	320.46	73.12	23431.96
Viii	5.9.13	Vertical and horizontal fins individually or forming box louvers band, fascia and eaves boards.	sqm	100.00	470.10	47010.00
ix	5.9.15	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	Sq.M	203.93	166.90	34036.64
x	5.9.16	Edges of slabs and breaks in floors and walls,				
	5.9.16.1	Under 20 cm wide	R.M.	3821.40	99.45	380038.07
	5.9.17	Cornices and mouldings	Sq.M	73.97	495.50	36652.14
xi	5.9.19	Weather shade, Chajjas, corbels etc. including edges	Sq.M	340.02	411.10	139782.69
24	5.11	Extra for additional height in centring, shuttering where ever required with adequate bracing, propping etc. including cost of de shuttering and decentering at all levels, over a height of 3.5 m for every additional height of 1 metre or part thereof (Plan area to be measured)				
	5.11.1	Suspended floors, roofs, landing, beams and balconies (plan area to be measured).	Sq.M	6570.78	121.65	799334.98
25	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
	5.22.6	Thermo Mechanically Treated bars	Kg	416889.00	62.25	25951340.25
26	5.22A	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Above Plinth Level				
	5.22A.6	Thermo Mechanically Treated bars.	Kg	614930.07	62.25	38279396.86
27	5.29	Providing and fixing shet covering over expansion joints with iron screws as per design to match the colour /shade of wall treatment.				
	5.29.2	Aluminium fluted strips 3.15mm thick				
	5.29.2.1	150 mm wide	R.M.	1037.88	312.35	324181.82
28	5.30	Add or deduct for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	R.M.	312.70	22.25	6957.58
29	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, 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.				
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works upto plinth level.	CUM	277.83	5242.15	1456426.53
	5.33.2	All works above plinth level upto floor V level.	CUM	457.57	5781.50	2645440.96
30	5.34	Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.				
31	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg / Cum	CUM	146.00	63.20	9227.20
32	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Qti	120.00	589.80	70776.00
33	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of 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 the Engineer in-charge.				
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.37.1	All works upto plinth level.	CUM	277.83	5590.60	1553236.40
	5.37.2	All works above plinth level upto floor V level.	CUM	457.57	6130.00	2804904.10
34	5.40	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per directions of the Engineer in-charge.				
	5.40.1	All works upto Plinth level.	Cu.M	2222.65	5519.40	12267694.41
	5.40.2	All works above plinth & upto Floor V Level.	Cu.M	3660.54	6059.20	22179943.97
					TOTAL	121695493.77
				TOTAL [III]		121695493.77
IV 6.0 BRICK WORK						
35	6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:				
	6.1.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	288.41	3316.55	956526.19
36	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	1344.58	3876.15	5211793.77
37	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	6788.36	476.85	3237029.47
38	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	Sqm	9697.66	63.30	613861.88

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
					TOTAL	10019211.30
					TOTAL [IV]	10019211.30
V 7.0 STONE WORK						
39	7.38	Stone tile work for wall lining upto 10 m height with special adhesive over 12mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) including pointing in white cement with an admixture of pigment to match the stone shade.				
	7.38.1.1.	Granite stone of any colour and shade.	Sq.M	1200.00	1466.35	1759620.00
40	7.39	Extra for stone work for wall lining on exterior walls of height more than 10m from ground level for every additional height of 3 m or part there of .				
	a)	Height exceeding 10m but not exceeding 13m	Sq.M	125.00	65.85	8231.25
	b)	Height exceeding 13m but not exceeding 16m	Sq.M	140.00	131.70	18438.00
	c)	Height exceeding 16m but not exceeding 19m	Sq.M	40.00	197.55	7902.00
41	7.40	Providing and fixing dry cladding upto 10 metre heights with 30mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and/or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately.)				
	7.40.1	Red sand stone	Sq.M	2703.44	1989.40	5378223.54
42	7.42	Providing and fixing adjustable stainless steel cramps of approved quality and of required shape and size adjustable with stainless steel nuts bolts and washer (total weight not less than 260 gms) for dry stone cladding fixed on frame work at suitable location including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	Each	10813.76	171.20	1851315.71
					TOTAL	9023730.50
					TOTAL [V]	9023730.50
VI 8.0 MARBLE WORK						
43	8.2	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, vanity counters, windows sills, facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels.				
	8.2.2	Granite of any colour and shade				
	8.2.2.2	Area of slab over 0.50 sqm	Sq.M	416.44	3083.40	1284039.38
44	8.4	Extra for fixing marble / granite stone over and above corresponding basic item, in facia and drops of width up 150 mm with epoxy resin based adhesive including cleaning etc. complete	R.M.	92.00	185.80	17093.60
45	8.5	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / Granite / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	Each	76.00	281.10	21363.60
					TOTAL	1322496.58
					TOTAL [VI]	1322496.58
VII WOOD WORK 9.0						
46	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.				
	9.48.1	Fixed to steel windows by welding.	Kg	34.20	90.75	3103.65
47	9.119	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size complete as per manufacturers specification and direction of Enginner-in-Charge.	R.M.	175.65	404.60	71067.99

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
48	9.120	Providing and fixing 30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm . 19mm for styles and 15x15mm for top & bottom rails, M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45 degree angle on either side forming styles: and 5 mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded / sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter)				
	9.120.2	30 mm thick pre laminated PVC door shutters	Sq.M	47.48	2958.00	140454.71
49	9.42	Providing and fixing 18 mm thick ,150mm wide pelmet of flat pressed 3layer or graded wood particle board medium density grade I,IS:3087 market including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade,nickel plated brackets including fixing with 25x3 mm M.S.flat 10 cm long and rawl plugs 50 mm long (designation 10 no) etc ,all completed.	Rm	42.00	298.45	12534.90
					TOTAL	227161.25
					TOTAL [VII]	227161.25
VIII STEEL WORK 10.0						
50	10.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junction and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.				
	10.5.1	Using M.S angels 40x40x6 mmfor diagonal braces	Sq.M	10.50	2551.45	26790.23
51	10.14	Providing and fixing pressed steel door frames confirming to IS:4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.25mm pressed mild steelwelded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including stel butt hings 2.5 mm thick with mortar guards, lock strike- plate and shoxk absorbers as specified adn aplying a coat of approved stel primer after pre treatment of the surface as directed by Enginer-in-charges:				
i	10.14.1	Profile B	R.M.	693.98	346.75	240637.57
52	10.25	Steel work welded in built up sections/ framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.25.2	In gratings, frames, guard bard ladder, railings, brackets, gates and similar works	Kg	1641.50	77.90	127872.85
52(a)	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	kg	200.00	558.00	111600.00
					TOTAL	506900.64
					TOTAL [VIII]	506900.64
IX FLOORING						
53	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1cement : 3 coarse sand), finished with a floating coat of neat cement				
	11.6.1	18 mm thick	Sq.M	587.13	258.20	151596.97
54	11.3	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 thte cost of nosing of steps etc. complete.				
	11.3.1	40mm thick with 20mm nominal size stone aggregate.	Sq.M	294.08	280.05	82357.10

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
55	11.20	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand)				
	11.20.2	Medium shade with 50% white cement and 50% ordinary cement.	Sq.M	420.86	789.55	332291.99
56	11.23	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement:4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with:				
(i)	11.23.2	Raj nagar plain	Sq.M	1381.98	1265.35	1748685.11
(ii)	11.23.5	Udaipur green marble	Sq.M	3110.69	1418.95	4413910.40
57	11.24	Extra if pre finished nosing to treads of steps of marble stone.	R.M.	1455.40	197.75	287805.35
58	11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 metre	Sq.M	222.48	230.55	51292.76
59	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of 1:4 (1 cement :4 coarse sand):				
	11.26.1	25 mm thick	Sq.M	4720.52	945.70	4464193.43
60	11.27	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	Sq.M	346.68	954.10	330764.47
61	11.31	Extra for pre finished nosing in treads of steps of kota stone / sand stone slab	R.M.	197.65	52.45	10366.74
62	11.32	Extra for kota / stone sand stone in treads of steps and risers using single length up to 1.05 metre.	Sq.M	203.58	12.10	2463.32
63	11.36	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.	Sq.M	891.33	724.25	645543.58
64	11.37	Providing and laying ceramic glazed floor tiles 300x300mm (thickness to be specified by the manufacture) of Ist quality conforming to IS:15622 of approved make in colours such as white, Ivory, Grey, Fume Red Brown, laid on 20mm thick cement Mortar 1:4 (1 cement:4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete.	Sq.M	450.00	764.55	344047.50
65	11.41	Providing and laying polished 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.				
(i)	11.41.2	Size of Tile 60x60cm	Sq.M	2226.28	1337.10	2976759.19
(ii)	11.41.4	Size of Tile 100x100cm	Sq.M	291.04	2246.10	653711.23
					TOTAL	16495789.13
					TOTAL [IX]	16495789.13
X ROOFING 12.0						
66	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design:				
	12.21.1	In 75x75mm deep chase	R.M.	369.86	109.05	40333.36
67	12.22	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.	Each	21.00	148.75	3123.75
68	12.55	Providing and fixing Heat Resistant Terrace Tiles (300mm x 300mm x 20mm) with SRI (Solar refractive index) > 78, solar reflection >0.70 and initial emittance >0.75 on waterproof and sloped surface of terrace, laid on 20mm thick cement sand mortar in the ratio of 1:4 (1 cement :4 coarse sand) and grouting the joints with mix of White cement & marble powder in ration of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150mm height along the parapet walls in the same manner.	Sq.M	1395.00	1033.70	1442011.50
					TOTAL	1485468.61
					TOTAL [X]	1485468.61
XI FINISHING 13.0						

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
69	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix:				
i	13.2.1	1:4 (1 cement: 4 fine sand)	Sq.M	369.86	143.55	53093.58
ii	13.2.2	1:6 (1 cement: 6 fine sand)	Sq.M	13673.78	130.20	1780325.96
70	13.4	12 mm cement plaster of mix:				
	13.4.1	1:4 (1 cement: 4 coarse sand)	Sq.M	3304.20	132.10	436484.82
71	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	Sq.M	155.32	173.10	26885.37
72	13.16	6 mm cement plaster of mix:				
	13.16.1	1:3 (1 cement: 3 fine sand)	Sq.M	10576.01	101.00	1068176.70
73	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.				
		exceeding 10m Height to 13m	Sq.M	733.33	28.85	21156.67
		exceeding 13m Height to 16m	Sq.M	733.57	57.70	42327.07
74	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	11645.18	83.80	975866.08
75	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	Sq.M	211.24	11.75	2482.07
76	13.42	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1	Two or more coats on new work	Sq.M	5822.59	37.35	217473.74
77	13.46	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				
	13.46.1	New work (Two or more coats applied @ 1.67 Litres/10 Sq.M over and including base coat of water proofing cement paint applied @ 2.20 Kg/10 Sq.M.	Sq.M	570.55	67.50	38512.20
78	13.50	Applying priming coat :				
	13.50.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood.	Sq.M	556.33	24.70	13741.35
	13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works.	Sq.M	88.06	20.70	1822.84
79	13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :				
	13.69.1	New work	Sq.M	556.33	60.50	33657.97
80	13.79	Extra for addition of synthetic polyester triangular fibre of length 6mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125gms of synthetic polyester triangular fibre for 50kgs. Cement used in cement mortar as per directions of Engineer-in-Charge.	Per Bag of 50 Kg of Cement	460.00	53.00	24380.00
81	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the	Sq.M	11645.18	76.05	885615.94
82	13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	13.83.2	Two Coats	Sq.M	5822.59	61.45	357798.16
83	13.84	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	13.84.2	Two Coats	Sq.M	573.10	53.90	30890.09
					TOTAL	6010690.60
				TOTAL [XI]		6010690.60
XII ROAD WORK 16.0						
84	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 with lead upto 50 metres.	Sq.M	120.00	61.25	7350.00
85	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 coarse sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge.	Sq.M	48.00	536.65	25759.20

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
86	11.45	Providing and laying 500 x500 x40mm thick Turf paver (Turfpave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and based courde and filling with 150mm thick jamuna sand, including spreading ,well ramming ,consolidating and finishing smooth etc. all complete as per direction of Engineer-in-Charge.	Sq.M	72.00	1651.20	118886.40
					TOTAL	151995.60
				TOTAL [XII]		151995.60
XIII DRAINAGE 19.0						
87	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	Each	28.00	256.75	7189.00
	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.	Each	2.00	1185.05	2370.10
88	19.4.1.1	Providing and fixing S.W gully trap with F.P.S Brick class designation 75	Each	15.00	1256.35	18845.25
					TOTAL	28404.35
				TOTAL [XIII]		28404.35
CH-21.0 ALUMINIUM WORK						
89	21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing 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				
	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	Nos	2.00	1953.10	3906.20
90	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc to be paid separately).	Sq.M	6.12	4444.75	27201.87
					TOTAL	31108.07
				TOTAL [XIV]		31108.07
CH-22.0 WATER PROOFING						
91	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) Applyaing a slurry coat of neat cement using 2.75 kg/sq. of cement admixed with water prrofig compound conforming to IS. 2645 and aproved 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 115 mm 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 upto 300mm 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 approve 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 wsater proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth aproved 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 to 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-Chage:				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sq.M	3350.19	786.70	2635592.61
				TOTAL [XIV]		2635592.61

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
XV	NON SCHEDULE ITEMS					
1	N.S-1	Diluting and injecting chemical emulsion for PRE-CONSTRUCTIONAL Anti-termite treatment and creating continous chemical barrier, wall trenches, top surface of plinth filling, along the external perimeter of building, over the top surface of consolidated earth of which apron is to be laid, surroundings of pipes and conduits etc. complete as per specification. (Plinth area of the building at ground floor only shall be measured for payment). Chlorpyriphos Emulsifiable concentrate of 20% with 1% Concentration	Sq.M	2630.88	310.39	816598.84
2	N.S-2	Providing and Fixing ISI marked 35mm thick flush Prelaminated door shutter, (with 1mm thick lamination on both sides) core of block board construction with frame of 1st class hardwood and well matched Commercial 3 ply veneering and as approved by Engineer	Sq.M	278.16	2816.00	783298.56
3	N.S-3	Brick work flyash cement brick class desination 75 in supper structure above plinth level upto floor V level . Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	576.25	3589.32	2068345.65
4	N.S-4	Half brick work flash cement brick of class desination 75 cement mortar 1:4 (1 cement : coarse sand) including scofolding and curing etc, complete as per specification superstructure above plinth level upto floor level. Cement mortar 1:4 (1 cement : 4 coarse sand)	Sq.M	2036.51	378.41	770635.75
5	N.S-5	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc with 24 mm thick unit consist of outer glass SGG 6mm thick EVO Star ET 425 Aura Green, having 12mm air gap, and inner glass 6 mm thick clear float toughened of Saint-Gobain make with following performance. VLT-21%, Solar Factor-0.18, U value -2 .0 W/sqm K. Including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.The contractor must provide details of structural calculations of the Mullion / Transom member offered, and also provide drawings of individual profiles - Mullion, Transom, Pressure Plate, cover plate and also details of any other profiles that may be used - clearly indicating all dimensions, wall thickness and weight - kg./m. The anchoring / bracing of the curtain wall glazings to the RCC slab /beams / columns shall be done with non-corrossive galvanised brackets of approved design, (Galvanising to be done conforming to IS:4759-1996 upto 610 gms. per sqm. (80-90 micron thickness) with two numbers on each beam, including providing PVC spacers between the aluminium Mullion Member and Bracket (including providing and fixing of aluminium shims of various thickness to adjust the beam level/line variations) with dash fasteners and stainless steel bolt to provide a minimum anchoring depth of 50 - 80 mm. in the concrete and to withstand the dead load of the curtain wall as well as stresses due to wind pressure etc.The glazing framework shall be aligned for the entire height of each Mullion and for the entire width of each Transom by lazer beam equipment to ensure 100 per cent 'X' axis and 'Y' axis	Sq.M	482.87	7134.00	3444794.58
6	N.S-6	Designing, Providing, Fabrication at site and installing aluminium door/ Aluminium Window/ Aluminium sliding window/Aluminium Partitions (Jindal 8830 series or equivalent) AC 15 Anodised with 101x45x2mm Aluminium frame work all around. The window should have on Mesh shutter inside along with two glass shutter, the botom track section to have milled ends to be sealed with silicone/ isobuty/ putty with 6.0mm thick non toughened ST 707 advance solar control glass complete.	Sq.M	53.65	5312.00	284988.80
7	N.S-7	Providing and fixing aluminium works for partitions with extruded built up standard tubular sections 12 mm thick prelaminated partical board with decorative lamination on both sides with float glass panes of 6 mm thickness	Sq.M	190.57	2769.00	527688.33
8	N.S-8	Providing & Fixing Float Glass 4mm thick (10Kg/Sqm) with steel beading of approved shape & section with screws in pressed steel door, window & CSW's Frames/Shutter & M.S. Tubular section shutters of doors & windows.	Sq.M	4.65	610.00	2833.76
9	N.S-9	Supplying and Fixing Drapery rods 30mm dia of M.S Pipe of thickness 1.6mm with powder coating (wooden finish) including metal brackets, rings and ends all as specified. Fixed to brick walls/RCC lintels with dash fastners.	R.M	508.20	150.00	76230.00
10	N.S-10	Providing and laying in position cement concrete 1:5:10 (1 cement: 5 course sand: 10 Brick aggregate 40mm nominal Size) in foundations/ sunken floors of toilets excluding the cost of centering and shuttering.	Sq.M	233.21	3396.00	791975.85
11	N.S-11	Supply and fixing of non OZONE make stainless steel railing with specifications SS-304 grade railing made of 38mm baluster and 38mm top rail of 1.6mm thickness with 3 mid rails of 12 OD tube connected with CNC machine made. Modular connectors fixed with dash fastners. Centre distance between each baluster shall be 1000mm. (Market Rate Item)	R.M	816.53	4820.00	3935674.60

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
12	N.S-12	Providing and fixing Ecophon SUPER G A with 40 mm natural square edge ,demountable panels with the option of weekly wet cleaning (Akutex T and Super G surfaces) and vacuum cleaning (Colorado surface) , manufactured from High density glass wool ,with the visible surface has an Akutex T coating , a glass fibre fabric (TEXONA)or a strong glass fibre (Super G) and the back of the tile should be covered with glass tissue . The glass wool core of the tiles should be tested and classified as non combustible according to prEN ISO 1182 .The system should have Sound Absorption NRC value of 0.9 (according to EN ISO 11654). Tiles should withstand a permanent ambient RH upto 95% at 30 * C without sagging , warping or delaminating (ISO 4611) . The light reflectance of the tiles should not be less than 84 % (for Akutex T surface)	Sq.M	3760.01	6073.40	22836014.37
13	N.S-13	Providing & fixing stainless steel pipe of 75mm dia of 1.6mm thickness of SS304 grade in balcony as shown on drawing	R.M	154.82	1827.00	282856.14
14	N.S-14	ACOUSTICAL FALSE CEILING Providing and fixing of Armstrong Mineral Fibre Acoustical Suspended Ceiling System with Fire fissured (Micro Look) edge tiles with Armstrong superfine 15mm exposed grid in module size 600x600x16mm with Bio Block Casting on the face of the tile. The grid shall be 15mm wide T-Section flanges colour white, main runner 1200mm & 600mm Cross Tees.	Sq.M	6984.48	2141.00	14953771.68
15	N.S-15	ARMSTRONG FALSE CEILING The ceiling to be constructed of ARMSTRONG THERMATEx FEINSTRATOS VT- 15 Mineral Fiber Tiles Recess Tegular edge (VT-15 edge), Humidity Resistance Panel upto 95% RH, NRC 0.55,white colour similar to RAL 9010 of 600mm x 600mm tile of 15mm thickness laid into an exposed grid (hanging grid) system (hanging grid) of 15mm grid, consisting of main runner spaced at 1200mm centers securely fixed to the structures soffit by approved hangers at maximum 1200mm centers. There should be a minimum of 1 hanger per 1500mm of ceiling area and last hanger should not be further than 450mm from the adjacent wall. 1200mm cross tees to be fixed between main runner at 600mm centers to form 1200mm x 600mm module & 600mm cross tees fitted centrally between 1200mm cross tees to create 600 x 600mm module. The product should be certified in accordance with Quality Assurance Standard to ISO 9001 and ISO 14001. The mineral panels should have RAL Seal Of Approval.	Sq.M	3179.59	1604.00	5100062.36
16	N.S-16	Providing applying cementations Krystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc with krystol T1 system/ . The application to be done from +ve(postive) side on wet open pore concrete surface with brush @ 1Kg/Sq.M as per manufacturer specification.	Sq.M	3618.83	441.00	1595904.03
17	N.S-17	Supply & fixing of structural glazing at Façade of ground plus three buildings using glazing section on direct stick mullion & transom system of which mullion shall be of 80x50x1.8 mm with notch & transom to be of 50x50x1.8 mm with notch , Aluminum Glazing sections shall be powder coated with heat treatment on three surfaces in Ivory/Black colour using 6mm thick TOUGHENED AVRA GREEN HEAT REFLECTIVE GLASS of approved colour of to be pasted with 12mm x 6 mm both side adhesive Spacer foam tape & structural silicon of Dow Corning 995 grade or it's equivalent. The Weather /water sealing of glass joints shall be done with 10 mm wide Dow Corning make weather sealant of grade 789 or its equivalent. The Mullion of Aluminum structure is to be fastened with R.C.C. Slab/beam with help of Powder coated/ Galvanized MS Brackets of 75 mm length with help of M10 x 100 mm Mechanical tempered Dash Fasteners. The job Includes all necessary hardware, cleat, Screws, nut washers etc. Complete job with all material and labour as per direction of Engineer-in-charge.	Sq.M	144.07	5662.00	815710.19
18	N.S-18	Providing and applying Silicon Based Water repellent coating by brush or by spray.	Sq.M	2102.67	232.00	487819.44
19	N.S-19	Supply and Fixing of KALZIP 65/400 "Self Supported" Secret Fix Standing Roofing System in 0.9mm Thick AA 3004 Aluminium Alloy. The general roof-construction shall comprise from bottom to top:	Sq.M	1009.10	3502.00	3533868.20
20	N.S-20	Providing and applying of cementitious crystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc. with Krystol T1/T2 system. The application to be done from -ve (negative) side on a wet open pore concrete surface with brush @ 0.8kg of Krystol T1 & 0.8kg of Krystol T2 as per manufacturer specification. including making grooves of 10x15mm size on the construction joints and treating with Krystol T1 mixed with water in ratio 5:1 (5 parts of krystol T1: 1 part of clean water) as per manufacturers specification etc. and as per direction of Engineer-in-Charges. The rate also includes the cleaning of surface to be treated with air compressor wherever required.	Sq.M	3085.09	737.00	2273711.33
21	N.S-21	WOODEN FLOORING Providing and fixing wooden flooring of 25mm thick with pre laminated flat pressed three layer Engineered Hard Wood Flooring on Stage of Armstrong or equivalent make exterior grade including edge profiles as may be	Sq.M	294.08	4913.00	1444815.04

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
22	N.S-22	Providing and Fixing Glass Mosaic Tiles (20x20)x4mm thick Random Pattern on walls with glass Mosaic Adhesive over 12mm thick screed in cement mortar 1:4 (1Cement 4 coarse sand) tile joints pointed in neat white cement slurry mixed with pigment to match with the shade / colour of the tiles coral /cheer.	Sq.M	2239.84	1396.00	3126816.64
23	N.S-23	VETRIFIED DOUBLE CHARGED Providing & fixing Vitrified Tiles 605x605mm (R Series) Double Charged Matt Finish (Premium Quality) of approved colour & shade laid over 20mm thick Cement mortar 1:4 (1Cement :4 Coarse Sand) jointed and pointed in white cement mixed with colour to match the colour & shade of the tiles.	Sq.M	1914.42	1670.00	3197082.43
24	N.S-24	PVC FLOORING Providing and installing of Accolade plus impregnated PUR Vinayl Sheet flooring 6 feet (1.83m) wide in Rolls having a nominal total thickness of [0.08 in (2mm)] of approved colour and shade laid over smooth, flat, hard and free from moisture, grease etc. using water based adhesive like VC 31 of pidilite or similar Accolade plus shall confirm to group P of wear Resistance as per EN 660-2 Fire Resistance of more than 11KW/m2 as per ISO 9329-1	Sq.M	147.05	2193.00	322488.11
25	NS.25	CHAIR 560mm to 600mm CTC, Rocking seat with auto tip up cushion, seat depth 650mm wooden armrest with fabric upholstred and with foldable writing tablet. Chair with Cover on the back side. Single Central foot for easy house keeping : Makes - Featherdite/ Godrei/ B.P Frno . approved by Architect & Client.	Nos	2700.00	5878.00	15870600.00
26	NS.26	SCREENS Supplying, installing, Testing and commissioning of 100" motorized Matt white projection screen wall with all accessories.	Nos	21.00	62715.00	1317015.00
27	N.S-27	Final coat of ultra permasand with chips (to offer grooved finish) over a coat of ultra permasand without chips (as base coat) over a repair check with exterior grade putty over a coat of acrylic primer. (as per approved shade).	Sq.M	4205.35	425.00	1787273.75
28	N.S-28	Supply and fixing of Stainless steel IS : 304 grade pergola made of stainless steel pipe made of 75mm dia pipes.	Each	6.00	301521.00	1809126.00
29	N.S-29	Ditto as in item above but with prelaminated particle board with decorative lamination on one side and balancing lamination on other side.	Sq.M	6.48	5150.00	33372.00
30	N.S-30	Providing Filling the Expansion joint with joint sealing compound on polyeurathane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete.				
		50mm thick Horizontal Expansion Joint	R.M	443.88	1583.00	702662.04
31	N.S-31	Providing Filling the Expansion joint with joint sealing compound on polyeurathane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete.				
		50mm thick Vertical Expansion Joint	R.M	594.00	1583.00	940302.00
32	N.S-32	STAINLESS STEEL FITTINGS				
	a.	Providing and fixing S.S.Sliding door bolt size 16mmx300mm finish SS Matt fixed with necessary screws etc. complete.(Make:-Ebco/Ozone/Dorma)	Each	52.00	538.00	27976.00
	b.	Providing and fixing S.S.Sliding door bolt size 16mmx250mm finish SS Matt fixed with necessary screws etc. complete..(Make:-Ebco/Ozone/Dorma)	Each	80.00	457.00	36560.00
	c.	Providing & fixing S.S. tower bolt Size 250x12mm finish SS matt with necessary screws etc., complete .(Make:-Ebco/Ozone/Dorma)	Each	428.00	269.00	115132.00
	d.	Providing & fixing S.S. tower bolt Size 100x10mm finish SS matt with necessary screws etc., complete.(Make:-Ebco/Ozone/Dorma)	Each	772.00	135.00	104220.00
	e	Providing & fixing S.S. handle size 25x150mm with necessary screws etc., complete..(Make:-Ebco/Ozone/Dorma)	Each	428.00	900.00	385200.00
	f	Providing & fixing S.S. handle size 15x100mm with necessary screws etc., complete.(Make:-Ebco/Ozone/Dorma)	Each	772.00	646.00	498712.00
	g	Providing & fixing S.S.Door Stopper size 65x2.5MM finish SS Matt with necessary Screws etc., complete..(Make:-Ebco/Ozone/Dorma)	Each	214.00	300.00	64200.00
	i	Providing & fixing alu. Diecast body tubluor type universal hydraulic door closer with necessary crews etc. complete..(Make:-Ebco/Ozone/Dorma)	Each	214.00	991.00	212074.00
33	NS-33	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	1627.87	300.00	488361.00
				TOTAL [XV]		97866770.46

PLUMBING WORKS		
SUMMARY OF COST		
S.NO	NAME OF SUB-HEAD	A
		DSR 2012
i	SANITARY INSTALLATIONS & C.P FITTINGS	603176.75
ii	CI PIPES & FITTINGS	502286.90
iii	RAIN WATER PIPES & FITTINGS	451001.00
iv	WATER SUPPLY WORKS	325346.70
v	EXTERNAL SEWRAGE	272407.30
vi	EXTERNAL DRAINAGE	442858.20
	TOTAL	2597076.85

MOUNT
NON SCHEDULE
323492.10
32557.19
31644.00
5187151.89
-
5574845.17

BILL OF QUANTITIES						
SECTION-A : INTERNAL PLUMBING WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
[i]		SANITARY INSTALLATIONS & C.P FITTINGS				
		DSR 2012 TEMS				
1		Providing and fixing wash basins with C.P. brass pillar tap, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls and floors where required.				
	17.7.1	White Vitreous china Wash basin of size 630 x 450mm with a pair of 15mm C.P brass pillar taps.	Each	76.00	1848.35	140474.60
2	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at back for the reception of pipes and fittings	Each	76.00	894.70	67997.20
3	17.22	Providing and fixing G.I. intel connection for fluse pipe connecting with W.C. pan.	Each	35.00	94.00	3290.00
4	17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm 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.	Each	7.00	8445.00	59115.00
	17.5.3	Range of three Uninal basin with 10 ltr. White PVC automatic flushing cistern.	Each	7.00	11046.80	77327.60
	17.5.4	Range of four Uninal basin with 10 ltr. White PVC automatic flushing cistern.	Each	1.00	13541.25	13541.25
5	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. / PVC 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	Each	7.00	5152.40	36066.80
	17.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern	Each	7.00	6826.65	47786.55
	17.6.4	Range of four squatting plates with 10 litre P.V.C. automatic	Each	1.00	8272.05	8272.05
6	17.7	Providing & fixing PTMT Bottle Trap for wash basin & sink				
	17.70.2	Bottle trap 38mm single piece moulded with heifht 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 266gms.	Each	39.00	435.30	16976.70
		Providing and fixing P.V.C. waste pipe for wash including P.V.C. waste fittings compete				
7	17.28.1	Semi rigid pipe				
	17.28.1.1	32mm dia	Each	76.00	59.50	4522.00
8	17.31	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.	Each	76.00	674.05	51227.80
9		Providing and fixing toilet paper holder:				
	17.34.1	CP brass	Each	35.00	250.95	8783.25
10		Providing and fixing C.P brass angle valve for basin mixer and geyser points of approved quality confirming to IS:8931				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	18.53.1	15 mm nominal bore	Each	123.00	449.35	55270.05
11	18.21	Providing and fixing unplasticised PVC connection pipe with brass unions				
	18.21.2	45 cm length				
	18.21.2.1	15 mm nominal bore	Each	123.00	61.70	7589.10
12	18.51	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.				
	18.51.1	15 mm nominal bore	Each	12.00	411.40	4936.80
		Total C/f to Summary		Total DSR ITEMS [i]		603176.75
		NON SCHEDULE ITEMS				
1	NS	Providing and Fixing C.P. brass Ablution health faucet assembly with 1.2 m long braided PVC hose with mounting bracket fixed on wall complete including diverter and two way angle valve[FOR EWC]	Each	35.00	503.10	17608.40
2	NS	Providing & fixing 4 mm thick SS hinged grating with rim of approved design including setting in floor with cement mortar.				
i		125 mm dia	Each	83.00	239.57	19884.32
3	NS	Providing & Fixing CP brass liquid soap container fixed to the wall with PVC rubber plug with C.P brass screw complete Each	Each	76.00	907.89	68999.37
4	NS	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, white vitreous china dual flushing cistern & C.P. flush bend with fittings & CI Brackets, 40 mm 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.	Each	35.00	5000.00	175000.00
5	NS	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast iron P or S trap, white vitreous china dual flushing cistern, including flush pipe, 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 580x440 mm with integral type foot rest.	Each	12.00	3500.00	42000.00
		Total C/f to Summary		Total NS ITEMS [i]		323492.10
[ii]		CI PIPES & FITTINGS				
		DSR 2012 ITEMS				
1	17.35	Providing and fixing soil, waste and vent pipes :				
	17.35.1	100 mm dia.				
	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	RM	320.00	857.30	274336.00
2	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:				
	17.58.1	100 mm	Each	200.00	207.85	41570.00
3	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 10x10x10cm 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.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	17.37.1	For 100 mm dia. pipe	Each	150.00	112.50	16875.00
4	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	Each	16.00	353.25	5652.00
5	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	Each	16.00	296.35	4741.60
6	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	Each	16.00	342.80	5484.80
7	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	100x100x100mm				
	17.43.1.2	Sand cast iron S&S as per IS-3989	Each	16.00	579.75	9276.00
8	17.44	Providing and fixing single equal plain junction of required degree.				
	17.44.1	100x100x100mm				
	19.44.1.2	Sand cast iron S&S as per IS-3989	Each	16.00	442.00	7072.00
9	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	Each	16.00	244.10	3905.60
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 :				
	17.60.1	100 mm inlet and 100 mm outlet				
	17.60.1.1	Sand cast iron S&S as per IS-3989	Each	47.00	801.70	37679.90
11	18.10 & 18.11	Providing and fixing G.I. pipes complete with G.I. fittings and clamps,including cutting and making good the walls etc. (internal work) Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall (for Waste Conn.from WB/Urinals/Sinks)				
i	(18.10.4+18.40.4+18.78)	32 mm dia nomina bore	RM	110.00	367.90	40469.00
ii	(18.10.5+18.40.5+18.78)	40 mm dia nominal bore	RM	60.00	436.60	26196.00
iii	(18.10.6+18.40.6+18.78)	50 mm dia nomina bore	RM	55.00	527.80	29029.00
		Total C/f to Summary		Total DSR ITEMS [ii]		502286.90
		NON SCHEDULE ITEMS				
1	NS	Providing and fixing G.I Inlet fitting with maximum 3 inlets 32, 40 or 50 mm size fabricated from 100 mm dia G.I pipes(approx. length=150mm to 300mm) and welded G.I sockets, fixed to CI trap with lead caulked joint and set in cement concrete as per standard drawing including cost of Bitumastic paint complete.	Each	48.00	503.12	24149.78

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
2	NS	Providing & fixing 100X50 mm. dia. G.I elbow (drain point) in the toilet floor including 100 mm dia. C.P. waste jali complete as required.	Each	35.00	240.21	8407.41
		Total C/f to Summary			Total NS Items [ii]	32557.19
[iii]		FOR RAIN WATER:				
1	17.35	Providing and fixing soil, waste and vent pipes:				
	17.35.1	100mm dia				
	17.35.1.1	Sand cast iron S&S as per IS-1729	RM	500.00	734.30	367150.00
2	17.58	Providing lead Caulked joints to sand cast iron/centrifugally cast (spun) iron pipes & fittings of diameters.				
	17.58.1	100 mm	Each	200.00	207.85	41570.00
3	17.37	Providing & fixing M. S. holder - bat clamps of approved design to sand Cast iron/cast iron (spun) pipe embedded in & including cement concrete blocks 10*10*10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). Including cost of cutting holes&making good the walls etc.				
	17.37.1	For 100 mm dia pipe	Each	250.00	112.50	28125.00
4	17.57	Providing & fixing collar				
	17.57.1	100 mm dia				
	17.57.1.1	Sand Cast iron S&S as per IS:1729	Each	50.00	177.85	8892.50
5	12.22	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 end making and finishing the outlet complete.	Each	29.00	148.75	4313.75
6	12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	Each	29.00	32.75	949.75
		Total C/f to Summary				451001.00
		(NON-DSR)				
1	NS	Providing and fixing cast brass clean out plug with suitable insert keys for opening in brass cap, male threaded joint/reducer with G.I. socket caulked to Pipe/fittings of CI pipe /Floor trap including cost of lead joints etc. complete in all respect.				
	i	100 mm dia.	Each	54.00	586.00	31644.00
		Total C/f to Summary			Total DSR Items [iii]	31644.00
[iv]		WATER SUPPLY WORKS				
		DSR 2012 ITEMS				
		COLD WATER SUPPLY:				
		C.P.V.C PIPES				
1	18.8	Providing & 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 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,				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i	18.8.1	15 mm nominal outer dia pipes	RM	105.00	218.65	22958.25
ii	18.8.2	20 mm nominal outer dia pipes	RM	80.00	243.05	19444.00
iii	18.8.3	25 mm nominal outer dia pipes	RM	65.00	297.95	19366.75
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stability for hot & cold wter supply, includign all CPVC plain & brass threaded fittings, i/c fixing the pipe with clampis 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.				
i	18.7.1	15mm dia. nominal bore	RM	5.00	133.95	669.75
ii	18.7.2	20mm dia. nominal bore	RM	20.00	157.15	3143.00
iii	18.7.3	25mm dia. nominal bore	RM	20.00	197.90	3958.00
iv	18.7.4	32mm dia. nominal bore	RM	5.00	252.65	1263.25
v	18.7.5	40mm dia. nominal bore	RM	10.00	348.25	3482.50
vi	18.7.6	50mm dia. nominal bore	RM	20.00	514.35	10287.00
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.	Each	4.00	450.90	1803.60
ii	18.17.3	40 mm nominal bore	Each	6.00	546.05	3276.30
iii	18.17.4	50 mm nominal bore	Each	2.00	780.60	1561.20
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.1	15 mm nominal bore.	Each	9.00	258.05	2322.45
ii	18.18.2	20 mm nominal bore.	Each	1.00	360.20	360.20
iii	18.18.3	25 mm nominal bore	Each	2.00	421.65	843.30
		External work				
5	18.9	Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stability for hot & cold wter supply, includign all CPVC plain & brass threaded fittings, This includes jointing of pipes & fittings with one step CPVC solvent cement , trenching , refilling and testing of joints complete as per direction of Engineer in charge.				
i	18.9.7	62.5 mm dia. nominal inner dia pipes	RM	100.00	1326.35	132635.00
6	18.12	Providing and fixing G.I. pipe complete with G.I fittings including trenching and refilling etc.				
	18.12.7	65 mm dia nominal bore	RM	26.00	453.55	11792.30
	18.12.8	80 mm dia nominal bore	RM	18.00	573.40	10321.20
7	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 100*100*75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm 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) 12 mm thick finished with a floating coat of neat cement complete as per standard design:				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i	18.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	1.00	908.95	908.95
8	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 in the pipe etc. complete:				
i	18.13.1	25 to 40 mm nominal bore	Each	4.00	277.35	1109.40
ii	18.13.2	50 to 80 mm nominal bore	Each	4.00	630.15	2520.60
		Total C/f to Summary		Total DSR Items [iv]		254027.00
		NON SCHEDULE ITEMS				
		Internal work - Exposed on wall				
9		Providing & fixing Chlorinated polyviny 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.				
i		100mm dia. nominal bore	RM	5.00	850.00	4250.00
10		Providing and fixing PN 16 Butterfly valve of the following dia				
i		100mm dia. nominal bore	RM	1.00	2500.00	2500.00
11	NS	Providing and fixing Puddle flanges fabricated out of 600mm long GI/MS pipe welded with 6mm thick M S plates along with flanges of suitable size and properly fixed in walls and top slabs of OHT / UGT complete.				
	i	50mm dia	Each	10.00	325.33	3253.26
	ii	80mm dia	Each	8.00	699.83	5598.63
12	NS	Providing & fixing of hand lever operated forged brass body full way ball valve type isolating valve having forged brass hard chrome plated mirror finish ball, steel handle with PVC grip, teflon seat, screwed ends tested to a pressure of 15 kg/sqcm complete.				
i		50 mm nominal bore	Each	1.00	1350.00	1350.00
13	NS	Providing and fixing 600 mm long MS Heavy Class puddle flanges fabricated out of 6 mm thick M.S. plates of suitable size properly fixed in walls & top slab of tanks of following diameters				
i		25 mm dia	Each	400.00	1500.00	600000.00
ii		32 mm dia	Each	400.00	2000.00	800000.00
iii		50 mm dia	Each	400.00	2500.00	1000000.00
iv		80 mm dia	Each	400.00	3000.00	1200000.00
v		100 mm dia	Each	400.00	3500.00	1400000.00
vi		150 mm dia	Each	40.00	4000.00	160000.00
		Total C/f to Summary		Total NS Items [iv]		5176951.89
		FLUSHING WATER SUPPLY:				
		C.P.V.C PIPES				
1	18.8	Providing & fixing Chlorinated polyviny 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 cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Concealed work , including cutting chases and making good the walls etc,				
i	18.8.1	15 mm nominal outer dia pipes	RM	70.00	218.65	15305.50
ii	18.8.2	20 mm nominal outer dia pipes	RM	40.00	243.05	9722.00
iii	18.8.3	25 mm nominal outer dia pipes	RM	55.00	297.95	16387.25
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stability for hot & cold wter supply, includign all CPVC plain & brass threaded fittings, i/c fixing the pipe with clampis 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.				
i	18.7.3	25mm dia. nominal bore	RM	4.00	197.90	791.60
ii	18.7.4	32mm dia. nominal bore	RM	12.00	252.65	3031.80
iii	18.7.5	40mm dia. nominal bore	RM	12.00	348.25	4179.00
iv	18.7.6	50mm dia. nominal bore	RM	20.00	514.35	10287.00
3	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.	Each	4.00	372.95	1491.80
i	18.17.2	32 mm nominal bore.	Each	8.00	450.90	3607.20
ii	18.17.4	50 mm nominal bore.	Each	3.00	780.60	2341.80
iii	18.17.5	65 mm nominal bore.	Each	3.00	780.60	2341.80
iii	18.17.6	80 mm nominal bore.	Each	1.00	1832.95	1832.95
iv		Total C/f to Summary			Total DSR Items [iv]	71319.70
		NON DSR				
1		Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stability for hot & cold wter supply, includign all CPVC plain & brass threaded fittings, i/c fixing the pipe with clampis 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.				
i		80mm dia. nominal bore	RM	12.00	850.00	10200.00
		Total C/f to Summary			Total DSR Items [iv]	10200.00
IV		EXTERNAL SEWERAGE				
1.0	2.10	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil,and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, with in a lead of 50 m:				
		All kinds of soil.				
i	2.10.1.2	Pipes, cablesetc. exceeding 80 mm dia but not exceeding 300 mm dia.	RM	200.00	165.60	33120.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
2.0	19.1	Providing, laying and jointing glazed stone ware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1cement :1 fine sand) including testing of joints etc complete.				
	19.1.2	150 mm diameter	RM	110.00	219.05	24095.50
i	19.1.3	200 mm diameter	RM	90.00	323.05	29074.50
3.0	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.				
i	19.3.2	150 mm diameter	RM	110.00	382.75	42102.50
	19.3.3	200 mm diameter	RM	90.00	449.90	40491.00
4.0	19.4.2.1	Providing and fixing square mouth S. W. Gully trap grade 'A' complete with C.I. grating brick masonry chamber with F.P.S bricks and water tight CI cover with frame of 300 x 300 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	Each	6.00	1278.30	7669.80
5.0	19.7	Constructing brick masonry manhole in cement mortar 1 : 4 (1 cement : 4 coarse sand) RCC top slab with 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 grade stone aggregate 20mm nominal size); foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1cement 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design				
	19.7.1	Inside size 90 x 80 cm & 45 cm deep including CI cover with frame (light duty) 455 x 610mm internal dimension total wt. of cover & frame to be not less than 38 kg (wt. of cover 23 kg and wt. of frame 15 kg)				
	19.7.1.1	With F.P.S. bricks with class designation 75	Each	12.00	7132.00	85584.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	40.00	256.75	10270.00
		Total Carried to DSR Items				272407.30
V		EXTERNAL DRAINAGE				
1.0	2.10	Excavating trenches in all kind of soil of required width for pipes. including excavation for sockets and dressing of sides, ramming of bottoms, including getting out the excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating Each deposited layer by ramming, watering, etc & disposing of surplus excavated soil as directed within a lead of 50m.				
		up to 1.50 m depth				
i	2.10.1.2	Pipes 80 mm to 300 mm diameter	RM	191.00	165.60	31629.60
2.0	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 RCC Pipes including bed concrete as per standard design.				
i	19.3.2	150 mm diameter	RM	85.00	382.75	32533.75
ii	19.3.4	250 mm diameter	RM	106.00	523.75	55517.50
3.0	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 (1cement :2 fine sand) including testing of joints etc complete.				
i	19.6.2	150 mm diameter R.C.C pipes	RM	85.00	254.50	21632.50
ii	19.6.3	250 mm diameter R.C.C pipes	RM	106.00	342.45	36299.70
iii	19.6.4	300 mm diameter R.C.C. pipe	RM	86.00	422.90	36369.40
iv	19.6.6	500 mm diameter R.C.C pipe	RM	52.00	722.50	37570.00
v	19.6.7	600 mm diameter R.C.C pipe	RM	40.00	1084.25	43370.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
4.0	19.9.1.1	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), inside plastering 12 mm thick with cement mortar 1:3 (1cement 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 40 mm nominal size) <i>and making necessary channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design</i>				
		0.91 m deep with SFRC cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to IS : 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 20 mm 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) with F.P.S.bricks class designation 75	Each	10.00	7007.40	70074.00
5.0	19.10.1	Extra for depth for circular manhole 0.91m internal dia at bottom with beyond 0.91m to 1.67m.				
		With FPS Bricks class designated 75	RM	8.00	3498.25	27986.00
6.0	19.27.1	Constructing brick masonry road gully chamber 50 x 45 x 60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500 x 450mm precast RCC horizontal grating with frame complete as per <u>standard design</u>				
		With FPS bricks	Each	12.00	3193.50	38322.00
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	45.00	256.75	11553.75
		Total Carried to DSR Items				442858.20

ELECTRICAL WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	INTERNAL ELECTRICAL WORKS	9126330.50	23533140.00
	Total C/F To Summary	9126330.50	23533140.00

BILL OF QUANTITIES						
SECTION-B : INTERNAL ELECTRICAL WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		DSR ITEMS				
1.0		Point wiring in PVC conduit, with modular type switch :-				
		Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.				
i	1.10.3	Group C	Point	1690.00	664.00	1122160.00
2.0	1.11	Wiring for twin control light point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with 2 Way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.	Point	20.00	710.00	14200.00
3.0		Sub main wiring in PVC conduit :-				
		Wiring for Submain/ Circuit wiring alongwith earth wire with the following sizes of PVC insulated, copper conductor single core cable in surface/ recessed PVC conduit as required.				
i	1.14.2	2 x 2.5 sq.mm. +1 x 2.5 sq.mm. Earth wire	RM	12500.00	131.00	1637500.00
ii	1.14.3	2 x 4 sq.mm. +1 x 4 sq.mm. Earth wire	RM	3500.00	162.00	567000.00
iii	1.14.4	2 x 6 sq.mm. +1 x 6 sq.mm. Earth wire	RM	1680.00	206.00	346080.00
iv	1.14.11	4 x 10 sq.mm. + 2 x 10 sq.mm. Earth wire	RM	2000.00	562.00	1124000.00
v	1.14.12	4 x 16 sq.mm. + 2 x 16 sq.mm. Earth wire	RM	2000.00	789.00	1578000.00
4.0		S/F Modular type electronic fan regulator :-				
	1.25	Supply and fixing of stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	351.00	322.00	113022.00
5.0		S/F Modular type blanking plate :-				
	1.26	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	10.00	22.00	220.00
6.0		S/F MODULAR BOXES, BASE & COVER PLATE :-				
		Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required				
i	1.27.1	1 or 2 Module (75 mm x 75 mm)	Each	326.00	142.00	46292.00
ii	1.27.2	4 Module (125 mm x 75 mm)	Each	50.00	154.00	7700.00
7.0		S/F MODULAR TYPE SWITCH / SOCKET :-				
		Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required				
i	1.24.1	5/6 amps switch	Nos	250.00	75.00	18750.00
ii	1.24.4	3 pin 5/6 amp. Socket outlet	Nos	250.00	96.00	24000.00
iii	1.24.6	Telephone Socket outlet	Each	46.00	89.00	4094.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
8.0		Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
i	1.21.1	20 mm.	RM	3500.00	56.50	197750.00
ii	1.21.2	25 mm.	RM	10000.00	64.50	645000.00
iii	1.21.3	32 mm	RM	2500.00	80.50	201250.00
iv	1.21.4	40 mm	RM	1000.00	106.00	106000.00
v	1.21.5	50 mm	RM	200.00	135.00	27000.00
9.0		Supply and drawing telephone wire of following pair, 0.5 sq.mm. FR PVC insulated copper conductor, unArmoured telephone cable in the existing surface / recessed conduit as required.				
	1.18.2	2 Pair	RM	2300.00	15.50	35650.00
10.0		S/F power plug point with all accessories :-				
	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 1 nos. 3 pin 5/6 amps modular socket outlet and one no. 5/6 amps modular switch, connection, painting etc. as required.	Each	98.00	288.00	28224.00
11.0		S/F power plug point with all accessories :-				
	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5/6 amps modular socket outlet and 15/16 amps modular switch, connection, painting etc. as required.	Each	155.00	366.00	56730.00
12.0		Supplying and fixing 5 amps. to 32 amps. rating, 240 volts 'C' series, miniature circuit breaker (MCB) suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.10.1	Single pole	Each	644.00	141.00	90804.00
13.0		Supplying and fixing following rating, double pole, (single phase and neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current Poin upto 300 miliampere in the existing MCB DB complete with connections,testing and commissioning etc. as required :				
i	2.14.1	25 amps	Each	21.00	1318.00	27678.00
14.0		Supplying and fixing following way, prewired SP & N MCB distribution board of sheet steel for 240 volts,on surface /recess, complete with loose wire box,terminal blocks,duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar,neutral link, earth bar, din bar, detachable gland plate, interconnections, phospatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.7.4	2 + 4 way Double Door	Each	13.00	2152.00	27976.00
	2.7.5	2 + 8 way Double Door	Each	8.00	2572.00	20576.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
15.0	2.18	Supplying and fixing 20 amps , 240 volts, SPN, industrial type socket outlet , with 2 poles and earth metal enclosed plug top along with 20 amps. "C" series, SP MCB in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	Each	5.00	693.00	3465.00
16.0		Supplying and fixing following way, prewired TP & N MCB distribution board of sheet steel for 415 volts, on surface /recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.8.5	4 way (4 + 12), Double door, horizontal type	Each	15.00	6345.00	95175.00
	2.8.6	6 way (4 + 18), Double door, horizontal type	Each	10.00	8197.00	81970.00
ii	2.8.7	8 way (4 + 24), Double door, horizontal type	Each	4.00	8984.00	35936.00
	2.8.8	12 way (4 + 36), Double door, horizontal type	Each	0.00	11042.00	0.00
17.0		Supplying & fixing following rating, four pole (three phase & neutral), 415 volts residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.15.1	25 Amp.	Each	5.00	1679.00	8395.00
ii	2.15.2	40 Amp.	Each	20.00	1703.00	34060.00
	2.15.3	63 Amp.	Each	6.00	1965.00	11790.00
18.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc, with coke and salt) as required.	Set	8.00	3996.00	31968.00
19.0	5.8	Supplying and laying 25 mm x 5 mm. Copper strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolts & spring washer spaced at 50 mm)	RM	64.00	680.00	43520.00
20.0	5.9	Supplying and laying 25 mm x 5 mm. G.I. strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of GI nut bolts & spring washer spaced at 50 mm)	RM	64.00	97.50	6240.00
21.0	5.14	Providing & fixing 25mm x 5mm Copper. strip on surface or in recess for connections etc. as required.	RM	200.00	766.00	153200.00
22.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
23.0	2.21	Providing and fixing M.V. danger notice plate of 200mmx150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	Each	8.00	121.00	968.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
24.0	1.35	Erection of wall bracket / ceiling fittings of all sizes and shapes containing upto two GLS lamps per fitting, complete with all accessories including connections etc. as required.	Each	76.00	39.00	2964.00
25.0	1.41	Installation, testing and commissioning of prewired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tubes etc. directly on ceiling / wall, including connection with 1.5 sq. mm. PVC insulated, copper conductor, single core cable etc. as required.	Each	684.00	69.50	47538.00
26.0	1.45	Installation, testing and commissioning of ceiling fan including wiring the down rod of standard length (upto 30 cm.) with 1.5 sq. mm. FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Each	351.00	99.00	34749.00
27.0	1.50.1	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connections, testing, commissioning etc. as required.	Each	24.00	163.00	3912.00
28.0	1.51	Extra for fixing the louvers / shutters complete with frame for exhaust fans of all sizes.	Each	24.00	68.50	1644.00
29.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	405.00	40500.00
ii	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	464.00	46400.00
iii	4.1.3	300 mm width X 50 mm depth X 1.6 mm thickness	RM	80.00	677.00	54160.00
30.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
	9.1.30	3.5 X 300 sq. mm (70mm)	Each	24.00	867.00	20808.00
	9.1.27	3.5 X 185 sq. mm (57mm)	Each	4.00	616.00	2464.00
	9.1.24	3.5 X 95 sq. mm (45mm)	Each	6.00	366.00	2196.00
	9.1.21	3.5 X 35 sq. mm (32mm)	Each	4.00	223.00	892.00
	9.1.33	4 x 16 sq. mm (28mm)	Each	20.00	188.00	3760.00
31.0	7.5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.5.4	Above 185 sq. mm and upto 400 sq. mm	RM	1000.00	44.00	44000.00
32.0	7.8	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
	7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	RM	200.00	16.50	3300.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	7.8.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	RM	300.00	38.50	11550.00
	7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	RM	500.00	72.50	36250.00
33.0	8.5	Laying of one number XLPE power cable of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.				
	8.5.2	Above 120 sq. mm. and upto 400 sq. mm.	Metre	250.00	231.00	57750.00
34.0		Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	3.00	14225.00	42675.00
35.0		Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	1.00	19128.00	19128.00
36.0	18.12	Providing and fixing G.I. pipe complete with G.I fittings including trenching and refilling etc.				
	18.12.7	65 mm dia nominal bore	RM	50.00	453.55	22677.50
	18.12.8	80 mm dia nominal bore	RM	50.00	573.40	28670.00
Total carried to DSR Items					Rs.	9126330.50
II) NON SCHEDULED ITEMS						
1.0		S/F power plug point with all accessories :-				
		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing Two nos. 3 pin 5/6 amps modular socket outlet and One no. 5/6 amps modular switch, connection, painting etc. as required.	Each	326.00	300.00	97800.00
2.0		Supply and installation of plug-in-type telephone socket outlet with 1.2mm thick outlet box and cover plate complete as required in 3 module plate (1 socket with 2 blank plate).				
		RJ - 11	Each	46.00	116.00	5336.00
3.0		Supply, installation, testing and commissioning of Cat - 6 flush mounted information outlets wired according to T568B standard with a faceplate. The plastic shall be high impact, flame retardant & UL-rated thermoplastic with minimum insulation.				
		Single surface mount/recessed box with jacks (RJ-45) I/O	Each	326.00	126.00	41076.00
4.0		Supply, laying, testing and commissioning of 4 pair Cat - 6 non plenum cable of 24 AWG solid copper conductors in existing conduits.	RM	3260.00	26.00	84760.00
5.0		Supplying, fixing, connecting & testing of Telephone Tag Block krone type in a suitable size 1.6 mm thick dust and vermin proof Sheet steel enclosure duly painted by synthetic enamel over anti corrosive primer, lockable and hinged cover with provision for cable through glands complete in all respects.				
i		40 pair krone	Each	4.00	602.00	2408.00
6.0		Supplying and Earthing with Cu earth plate 600mm x 600 mm x 3 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc, with coke and salt) as required.	Set	8.00	6010.00	48080.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
7.0		Providing & fixing 50mm x 6mm G.I. strip on surface or in recess for connections etc. as required.	Rm	100.00	111.00	11100.00
8.0		Providing & fixing 50mm x 6mm Cu. strip on surface or in recess for connections etc. as required.	Rm	100.00	1001.00	100100.00
9.0		S/F of hexagonal fan box with hexagonal side of approx. 80 mm.in length fabricated from 14 SWG M.S. sheet incorporating with 10 mm. dia. M.S. round bar duly bent for supporting fan hanger painted with red oxide and screwing arrangement with wiring conduit laid in the R.C.C. roof before concreting along with supply of all materials, labour, T&P etc. for proper completion of work.	Each	351.00	255.00	89505.00
10.0		Supply, laying, jointing, testing and commissioning of ISI marked (IS : 14930, part 2) H.D.P.E. (DWC) Double wall Corrugated pipe for cable laying having corrugation on outer wall and plain smooth surface at inner side including transportation upto the site, jointing, providing and fixing all fittings i.e. sockets, couplers, reducers, end caps etc to complete the works in all respects.				
i		300 mm. ID	RM	600.00	803.00	481800.00
ii		150 mm. ID	RM	200.00	546.00	109200.00
11.0		Supply of wall mounted mirror light fixtures complete as per standard item with copper wiring and GLS / CFL lamps as required as per the standard catalogue item approved by engineer-in-charge.				
i		1 x 11 W	Each	76.00	700.00	53200.00
12.0		Supply of wall / ceiling surface mounted T5 fluorescent tube light luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required each fluorescent tube etc complete as required as per the standard catalogue item as approved by engineer-in-charge . power factor shall not be less than 0.95 and THD shall be less than 10%				
i		1 x 18 watt (BBS170 1xDLED -5000 PSU WH) 15 W LED Downlighter	Each	108.00	2100.00	226800.00
ii		1 x 28 W T5 (CRCA Body)(TMS122 M 1xTL5-28W EBT)	Each	118.00	1170.00	138060.00
iii		1 X 43 w led Flat Panel (RC366B LED33-5000 PSU OD WH)	Each	458.00	9265.00	4243370.00
iv		3 x 14 W Recessed mounted Light (RC795B 3xTL-514W EBP)	Each	127.00	5820.00	739140.00
v		4 x 14 W Recessed mounted Light (RC795B 4xTL-514W EBP)	Each	428.00	6000.00	2568000.00
13.0		Supplying of 240V, 1 phase Ceiling Fans complete with suitable length down rod as required. The fan should be five star rating as per BEE.				
i		1200mm sweep	Each	351.00	1305.00	458055.00
14.0		Supplying of 240V, 1 phase Exhaust fans with 1.5 Sqmm insulated copper conductor wires for connections complete as required. The exhaust fan should be five star rating as per BEE.				
		450mm sweep	Each	224.00	1150.00	257600.00
15.0		Supplying testing & commissioning for following size of XLPE aluminium conductor armoured cable of 1.1 KV grade as required.				
i		3.5 Core 300 sq. mm. Armoured Aluminium cable.	RM	1050.00	1407.00	1477350.00
ii		3.5 X 185 sq. mm Armoured Aluminium cable.	RM	500.00	920.00	460000.00
iii		3.5 X 95 sq. mm Armoured Aluminium cable.	RM	300.00	497.00	149100.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
iv		3.5 X 35 sq. mm Armoured Aluminium cable.	RM	200.00	228.00	45600.00
v		4 x 16 sq.mm. Armoured Aluminium cable.	RM	500.00	151.00	75500.00
16.0		Erection of wall bracket / ceiling fittings of all sizes and shapes containing three/four lamps per fitting, complete with all accessories including connections etc. as required.	Each	555.00	40.00	22200.00
17.0		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Following Panels, fabricated out of 14/16 Gauge CRCA sheet steel in cubicle compartmentised modular construction complete with supporting rigid structure, interconnections, aluminium bus bar strip with heat shrinkable colour coded current density of bus bar 0.8 A per sqmm Identification on all breakers & MCCB to indicate the area they serve. Degree of protection IP 42, earthing hinged doors with 2.5 sqmm tinned braded copper wire, free standing floor mounted with removable Gland Plates on top & bottom of the panel, all mounting plates shall be GI sheets. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. Galvanised hardwares with zinc passivation shall be used in fabrication of panels 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system.				
i		Main LT Panel				
		Incoming: (Transformer)				
		One (1) Nos. 1250A FP ACB EDO Type				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-1250A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Incoming: (DG 1)				
		One (1) Nos.800A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-800A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Coupler:				
		Two (2) Nos. 1600A, FP ACB EDO Type				
		Bus Bar:				
		4000A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Each. 800A FP ACB EDO Type				
		Three (3) Each. 160A TPN MCCB				
		Four (4) Each. 100A TPN MCCB				
		Three (3) Each. 63A TPN MCCB	Set	1.00	1750000.00	1750000.00
ii		Lower Ground Floor Panel				
		Incoming:				
		One (1) Nos.100A TPN MCCB				
		Metering:				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-100A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		160A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Three (3) Nos. 40A TPN MCB				
		Six (6) Nos. 32A TPN MPCB				
		Four (4) Nos. 25A TPN MCB				
		Three (3) Nos. 25A DP MCB	Set	1.00	40000.00	40000.00
iii		Lower Ground Floor UPS Panel				
		Incoming:				
		One (1) Nos.25A DP MCB				
		Metering:				
		One (1) Nos. (0-240V)				
		One (1) Nos. (0-25A) .				
		One (1) Set of Phase Indication Lamp				
		Bus Bar:				
		40A,DP aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 16A DP MCB	Set	1.00	8500.00	8500.00
iv		Ground Floor Panel				
		Incoming:				
		One (1) Nos. 100A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-100A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		125A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Three (3) Nos. 40A TPN MCB				
		Four (4) Nos. 25A TPN MCB				
		Six (6) Nos. 32A TPN MPCB				
		Two (2) Nos. 25A DP MCB				
		One (1) Nos. 16A DP MCB	Set	1.00	25000.00	25000.00
v		Ground Floor UPS Panel				
		Incoming:				
		One (1) Nos.25A DP MCB				
		Metering:				
		One (1) Nos. (0-240V)				
		One (1) Nos. (0-25A) .				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		One (1) Set of Phase Indication Lamp				
		Bus Bar:				
		40A,DP aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Three (3) Nos. 16A DP MCB	Set	1.00	8500.00	8500.00
vi		First Floor Panel				
		Incoming:				
		One (1) Nos. 100A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-100A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		125A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Nos. 40A TPN MCB				
		Six (6) Nos. 32A TPN MPCB				
		Two (2) Nos. 25A TPN MCB				
		Four (4) Nos. 16A DP MCB	Set	1.00	25000.00	25000.00
vii		First Floor UPS Panel				
		Incoming:				
		One (1) Nos.40A TPN MCB				
		Metering:				
		One (1) Nos. (0-500V)				
		One (1) Nos. (0-40A) .				
		One (1) Set of Phase Indication Lamp				
		Bus Bar:				
		63A,TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 25A TPN MCB				
		Two (2) Nos. 16A DP MCB	Set	1.00	8500.00	8500.00
viii		Second Floor Panel				
		Incoming:				
		One (1) Nos.160A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-160A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		200A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 63A TPN MCCB				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Five (5) Nos. 40A TPN MCB				
		Six (6) Nos. 32A TPN MPCB				
		Two (2) Nos. 25A DP MCB				
		One (1) Nos. 16A DP MCB	Set	1.00	40000.00	40000.00
ix		Second Floor UPS Panel				
		Incoming:				
		One (1) Nos. 63A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 40A TPN MCB				
		Two (2) Nos. 32A TPN MCB	Set	1.00	65000.00	65000.00
x		Third Floor Panel				
		Incoming:				
		One (1) Nos.160A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-160A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		200A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Three (3) Nos. 63A TPN MCCB				
		Two (2) Nos. 40A TPN MCB				
		Four (4) Nos. 32A TPN MPCB				
		Two (2) Nos. 25A DP MCB				
		One (1) Nos. 16A DP MCB	Set	1.00	40000.00	40000.00
xi		Third Floor UPS Panel				
		Incoming:				
		One (1) Nos. 63A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 40A TPN MCB				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Two (2) Nos. 32A TPN MCB	Set	1.00	65000.00	65000.00
x		Capacitor Panel (250 KVAR)				
		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Automatic control panel with capacitgors, fabricated out of 2 mm thick CRCA sheet steel in cubicle compartmentised modular construction, free standing floor mounted. Cable gland plates shall be provided on top the panels. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system. Galvanised hardwares with zinc passivation shall be used in fabrication of panels.				
		Incoming				
		800 Amps FP electrically operated fully drawout type air circuit breaker as per specification and with following accessories:				
		96 x 96 sqmm 0-800 A digital Ammeter with selector switch, CTs				
		Phase indicating light shall be protected by 2 Amps SP MCBs – 3 sets				
		Power factor compensating relay (including power factor meter) in 7 steps for automatic cut off or add on capacitor units to keep the power factor at 0.97 with variation of loads. All associated auxiliary contactors / relays / timer / auto manual selector switches to be provided – 1 set				
		Bus Bars				
		1000 Amps TPN aluminium bus bars with coloured heat shrinkable insulated sleeves – 1 set				
		Outgoing				
		Outgoing feeders consisting of following accessories :				
		3 Sets – 160 Amps TP MCCB, capacitor duty contactors & 50 KVAR heavy duty capacitors.				
		4 Sets – 63 A TP MCCBs, capacitor duty contactors & 25 KVAR heavy duty capacitors.				
		Auto Manual Selector switch push button and indicating lamps. – 11 Sets	Set	1.00	500000.00	500000.00
xi		External Feeder panel with timer and contractor				
		Incoming:-				
		(1) No. 63A FP MCCB (35 KA).				
		Metering:				
		One (1) No. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) No. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each.32A TPN MCB	Set	1.00	25000.00	25000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
18.0		Supply, Installation, testing, Commissioning of LPI Stormaster ESE type advance lightning protection complete with the lightning air terminal - Configured as a Spheroid which is comprised of separate electrically isolated 4 panels surrounding an Earthed Central Finial. The Insulation material used to electrically isolate the panels shall be comprised of a base polymer which provides high Ozone & UV resistance with di-electric strenght of 24-38 KV/mm tested as per NFC 17-102 & IEC 60-1:1989. The ESE teRminal shall not contain any electronic circuits or any moving parts for its operation. The ESE teRminal shall be tested & certified by CPRI (Central Power Research Institute, Govt of India) for the Impulse current of 45 KA (8/20 micro sec) with 5 positive & 5 negative impulse. The ESE teRminal shall be approved by DGMS (Director General of Mines Safety), Govt of India.				
i		Model: Stormaster 60	Each	1.00	175000.00	175000.00
ii		LPI Upper Termination Kit	Each	1.00	30000.00	30000.00
iii		LPI Lower Termination Kit	Each	1.00	4500.00	4500.00
iv		FRP Mast (2mtr) with Inline Coupling Unit	Each	1.00	20000.00	20000.00
v		GI Mast (3 mtr) with guy wire kit	Each	1.00	10500.00	10500.00
19.0		Supply, Installation, testing, Commissioning of J K Maintenance Free Chemical Gel Earthing - Dual Pipe (GI) Technology of "JK CHENSODE" 3mtr long 80mm dia permanantly sealed at both the ends with the lead terminal at the top along with 50 kgs of duly filled with metallic conducting compound permanantly sealed at both the ends with the lead teRminal at the top along with 50 kgs of "RESLOW" grounding minerals duly tested & certified by CPRI. The earth pit chamber shall be of heavy duty Polyplastic earth pit cover.	Each	2.00	20000.00	40000.00
20.0		Supply, Installation, testing, Commissioning of specially designed lightning current LPI High Voltage Shielded Cable (HVSC) 7 layer cable consisting of Inner Core, Concentric Conductor (copper), Inner binding tape, Insulation material, Metallic screen, Outer binding tape, Outer sheath with the nominal cross sectional area of 50 sq.mm & overall diameter of 37mm with the insulation resistance of 1830 M Ohm-km, tested for 200 KV as per IEC 600601 connected to the Stormaster terminal with the factory upper termination & connected to the earth pit with the lower terminal kit to safely route the lightning current.	Rm	80.00	4000.00	320000.00
21.0		H.V. PANEL (11 KV - VCB PANEL)				
		Supply, installation, testing & commissioning of indoor type floor mounted metal clad, IP 52, 33 KV VCB panel with 3 nos VCB (1 incommmer and 2 out goings), totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS : 13118, as ammended upto date and additional specifictions, having capacities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker suitable for use on 33 KV, 3 Phase, 50 Hz A. C. supply with short circuit fault level of 1000 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated Aluminium alloy bus bars of suitable fault level, G.I. earth bar, earth bar, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil, control voltage of 24 Volt DC, TNC, LED type indicating lamps for phases and trip conditions and auxiliary switch of 6 NO + 6 NC and equipped with following switchgears and accessories.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		The panel should be suitable for connections for up to 3 x 300 sq.mm XLPE 33 KV cable (cable entry from bottom), end termination with heat shrinkable jointing material etc. as required. (The Cost of end termination not included in this item)				
		power pack (1 working & 1 standby) with 220 Volt AC input & 24 Volt DC continuous output suitable for indicating lights & closing / tripping / indication of 3 Nos. HT panel boards with 2 Nos. 12 Volts each maintenance free batteries of suitable AH each, charging unit, capacitor bank for emergency delivering for trip system complete with suitable capacity of Ammeter & Voltmeter i/c connections with 2.5 sq.mm FRLS insulated copper conductor cable etc. including DC DB consisting of 8 nos 32 Amp DP MCB's for DC supply distribution to panels as required.				
		Incoming - 1 No. 630 Amp. VCB with followings -				
		(a) 1 set (3 nos) 33 KV / v3 / 110 / v3 Volts drawout type PT Class 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering.				
		(b) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-0.5 for metering and class 5P10 for protection.				
		(c) 1 No. - (0-200A) Ammeter, analog type with selector switches.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay				
		(f) Microprocessor based numerical relay with IDMT setting for O/L, E/F and S/C protection.				
		(g) Restricted earth fault relay				
		(h) Over and Under voltage relay.				
		(i) Timer and TNC switch				
		Outgoing - 2 Nos. - 630 A VCB with followings in each breaker -				
		(a) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-1 for metering and class 5P10 for protection.				
		(b) (0-200A) Ammeters, dual scale analog type & selector switches for ammeters.				
		(c) Microprocessor based numerical relay with IDMT & instantaneous element for O/L, E/F and S/C protection.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay	Sets	1.00	1500000.00	1500000.00
22.0		Supply of 3 core stranded aluminium conductor 33 KV grade XLPE (E) (Cross linked Polyethylene) insulated PVC bedded, Galvanised flat steel strip armoured cable conforming to IS : 7098 (part II with latest amendments)				
		240 sq. mm 3 core	RM	250.00	6500.00	1625000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
23.0		Design, manufacture, testing at works supply, installation, testing and commissioning at site 33 KV/440V, 3 phase, 50 Hz, delta/star connected, outdoor type following sizes of transformers, oil immersed ONAN cooled, complete with all fittings such as oil conservator, silica gel breather, thermometer, explosion vent, Local ON LOAD tap changer with RTCC for +5% & -15% tapplings in step of 1.25 bidirectional roller, diagram & rating plate, oil temperature indicator, winding temperature indicator and buccholtz relay with wiring upto marshalling box, lifting lugs, first filling of oil, weather proof HT cable box, LT bus duct disconnecting chamber minimum 8 mm thick non magnetic gland plate etc. complete as per specification including 10% extra oil in non returnable drum for topping up as required. (The transformer shall be subject to all tests specified in the specifications and test certificates shall be produced).				
		750 KVA	No.	1.00	2000000.00	2000000.00
24.0		DIESEL GENERATING SETS				
24.1		Supply, erection, connecting testing and commissioning of following silent type 3 phase 415 volts 50 cycle per second 1500 RPM complete with engine alternator, radiator etc. The engine shall be complete with flywheel to suit flexible coupling with guard, air cleaner, fuel pump, variable speed governor, fuel filter, lube oil filter, pump and cooler starter water pump, battery charging generator, voltage regulator, 24 volt charged batteries of adequate capacity and instrument panel comprising switch with key, lube oil temperature gauge, lube oil pressure gauge, water temperature gauge, battery charging ammeter, safety control for low lube oil pressure and high cooling water temperature with tripping. The cost should be inclusive of the Acoustic enclosure also.				
		Costs allowed shall include full day oil tank/piping, Acoustics Enclosure, AMF Panel with Change Over Switch arrangement suitable for Cable connections from transformer with required number of runs as per SLD etc.				
i		380 KVA	Nos.	1.00	2500000.00	2500000.00
24.2		DG Exhaust				
i		SITC of following sizes of MS pipes of thickness 5.2 mm including all accessories and MS/GI supports as required.				
		150 MM (NB) MS ERW Pipe	RM	70.00	2000.00	140000.00
ii		S&F of 50 MM thick mineral wool insulation (of 93 Kg. per cubic meter density) over the exhaust pipes of following diameter so that the temprature at the surface of pipe should not exceed 50 degree centigrade.				
		150 MM (NB) MS ERW Pipe	RM	70.00	350.00	24500.00
iii		SITC of following sizes of SS Flexible Exhaust bellows for the following pipes				
		150 MM (NB) MS ERW Pipe	Nos.	2.00	7000.00	14000.00
iv		S&F of 50 MM thick mineral wool insulation (of 93 Kg. per cubic meter density) over the silencers of one generator so that the temprature at the surface of pipe should not exceed 50 degree centigrade.				
		For 380 KVA DG Set	Nos.	2.00	8000.00	16000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
v		S&F of miscellaneous Structural Support for exhaust pipes chimney of 30 meter	Kg	9000.00	50.00	450000.00
vi		Supply of HT 11 KV rubber hand gloves as per relevant IS Code	Set	2.00	1000.00	2000.00
vii		Supply and fixing CO2 type fire extinguisher conforming to IS 2876 with cylinder duly charged of capacity 4.5 kgs including fixing clamps brackets, bolts and nuts etc. as required.	Nos.	4.00	3500.00	14000.00
vii		Supplying of fire buckets of 9 litres capacity quality painted white from inside and red from outside and having inscription "FIRE" in white conforming to IS 2546-1974 duly amended upto date as required.	Nos.	4.00	5000.00	20000.00
viii		Sand Buckets-Set of Four	Nos.	1.00	2500.00	2500.00
ix		Supplying of first aid box with cover made out of 16 SWG MS sheet of size 450 mm x 600 mm x 200 mm and painted with two coats of enamel paint over one coat of steel primer and having inscription "FIRST AID BOX" in white and a red cross of suitable size with following items:				
		- 1 No. band-aid bandage 150mm				
		- 1 No. Savlon soap 100 ml				
		- 1 No. Bottle betadine 30 ml				
		- 1 No. Roll cotton				
		- 1 No. Packet dressing material	Set	1.00	1500.00	1500.00
x		Mechanical foam with trolley	Set	2.00	6500.00	13000.00
xi		Supply, installation of 1.1 KV grade ISI marked rubber mats of 1 meter width.	RM	20.00	1200.00	24000.00
xii		Supply of standard First Aid Box. (as per relevent standard)	Nos..	1.00	1000.00	1000.00
		TOTAL FOR NON DSR ITEMS				23533140.00

BILL OF QUANTITIES
FIRE FIGHTING WORKS

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		SUB HEAD (I) :- ELECTRICAL				
		DSR ITEMS				
1.0		Supplying and making end terminations with brass compression glands and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				
i	9.1.27	3.5 Core 185 sq. mm. Armoured Aluminium cable.	Nos.	4.00	616.00	2464.00
	9.1.21	3.5 Core 95 sq. mm. Armoured Aluminium cable.	Nos.	4.00	714.00	2856.00
	9.1.19	3.5 Core 50 sq. mm. Armoured Aluminium cable.	Nos.	8.00	601.00	4808.00
2.0		Supplying, fabricating and installing following size of perforated perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	405.00	40500.00
	4.1.4	101 mm width X 50 mm depth X 1.6 mm thickness	RM	50.00	677.00	33850.00
3.0	7.7	Laying and fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 kV grade of following				
	7.7.1	Upto 35 sq. mm (clamped with 1 mm thick saddle)	RM	30.00	19.50	585.00
	7.7.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40 x 3mm	RM	70.00	69.00	4830.00
		Total C/f to Summary		Total DSR ITEMS [i]		89893.00
		NON Scheduled items				
1		Fire Fighting Panel				
		(Location: - Pump Room)				
		Incoming:				
		One (1) Nos.400A,TPN MCCB with microprocessor based O/L, S/C and E/F releases.				
		Metering, Indication & Protection:				
		1 Sets of (0-500 Volt) 96 x 96mm Voltmeter with control fuses and 3 way selector switch.				
		1 Sets of (0-400 Amps) 96 x 96mm CT operated Ammeter with 3 way selector switch and 630/5A, CL-1, 10VA CT.				

		1 Sets of phase indicating lamps with Fuse.				
		Bus Bar:				
		500A, TPN Al. Bus Bar of suitable length (Neutral shall be fully rated).				
		Outgoings:				
		Three (3) Nos. 250A, TPN MCCB with ON/OFF indication lamps.				
		Two (2) Nos. 32A, TPN MCB				
		Two (2) Nos.25A, DP MCB				
i		Two (2) No.Auto Star-Delta starter of 80.0 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.				
ii		One (1) No. Auto Star-Delta starter for 10.0 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	1	250000.00	250000.00
2.0		Supplying and making end terminations with brass compression glands and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				
i		4 Core 4 sq. mm. Armoured Aluminium cable.	Nos.	2.00	450.00	900.00
		4 Core 2.5 sq. mm. Armoured Aluminium cable.	Nos.	4.00	350.00	1400.00
3		Supply,testing and commissioning of 1100 Volt grade XLPE insulated and sheathed aluminium conductor Armoured cables including the cost of providing required gap between adjacent cables (minimum one cable dia.) and including the				
i		3.5 Core 185 sq. mm. Armoured Aluminium cable.	RM	100.00	920.50	92050.00
ii		3.5 Core 95 sq. mm. Armoured Aluminium cable.	RM	60.00	497.00	29820.00
iii		3.5 Core 50 sq. mm. Armoured Aluminium cable.	RM	60.00	295.40	17724.00
iv		4 Core 4 sq. mm. Armoured Aluminium cable.	RM	30.00	91.00	2730.00
v		4 Core 2.5 sq. mm. Armoured Aluminium cable.	RM	15.00	85.00	1275.00
II		FIRE HYDRANT & SPRINKLER SYSTEM				

1.0		Providing, fixing, testing and commissioning of above ground M.S. C-Class Heavy Duty Pipes as per IS : 1239 (upto 150 mm dia.) and IS :3589 (upto 200 mm dia. And above) including cutting, screwing, welding etc. and providing all structural work fabricated from standard sections, (M.S. rounds, angles, channels etc.) and fittings like flanges, bends, tees, elbows, reducers, clamps, hangers, fasteners etc. including cutting, drilling, welding, cutting holes and chases in bricks /RCC walls/ slabs complete with painting of one coat of rich zinc primer and 2 or more coats of synthetic enamel paint of approved make / shade complete as per specification.				
i		150 mm dia.	RM	80	1750.00	140000.00
ii		80 mm dia.	RM	70	1050.00	73500.00
iii		25 mm dia.	RM	15	420.00	6300.00
2.0		Providing and Fixing M.S. pipe to I.S. 1239 (Medium duty) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets, reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. (for drain pipe) . The cost shall include the MS/GI structural supports as per approved drawings and specifications.				
a)		80 mm dia	Metre	60.00	735.00	44100.00
3.0		Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290:1969 Class C).	Each	18	5940.00	106920.00
4.0		Providing and fixing first aid fire hose reel drum wall mounting & swinging type fitted with 20 mm dia 36.5 m long high pressure hose to I.S. 5132 with 5 mm outlet SS nozzle with shut off valve (I.S. 884-1969). Name of Manufacturer should be embossed on the drum.	Each	15	7335.00	110025.00

5.0		Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification	Each	36	3837.00	138132.00
6.0		Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	18	1885.00	33930.00
7.0		Providing and fixing standard fireman's axe with heavy insulated rubber handle tested for 20000 watts.	Each	15	836.00	12540.00
8.0		Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.				
a)		Four way	Each	4.00	20260.00	81040.00
9.0		Providing, fixing, testing & commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate, 200 mm in diameter and 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968. (The cushion tank should be suitable for rated working pressure.	Each	3.00	12913.00	38739.00
10.0		Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)				
a)		25 mm dia full bore type	Each	15.00	769.00	11535.00

11.0		Providing and fixing fully glazed fire hose cabinet door 2000x800 mm depth fabricated with 20x20x3 mm and 40x20x3 mm hollow box sections mounted with 3 Nos 100 mm M.S. anodised butt hinges on M.S. angle frame of 45x45x5 mm size with hold fasts fixed to wall with PCC (1:2:4) blocks 100x100x100 mm including hasp and steeple for locking with pad lock arrangement, 4 mm thick clear float glass panel "FIRE HOSE" written on it with fire red, stove enamelled red paint to M.S. sections, black paint on inner side of lower glass panel complete as per approved detail.	Each	15.00	6638.00	99570.00
12.0		Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle at terrace)	Each	3.00	4049.00	12147.00
13.0		Providing and fixing cast iron butterfly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table "E" complete in all respects.				
a		80 mm dia with lever operated	Each	4.00	3904.00	15616.00
b		150 mm dia with lever operated	Each	15.00	7335.00	110025.00
14.0		Providing and fixing C.I. double flanged horizontal dual plate wafer type non return valves PN 1.6 including washer, nuts, bolts, 3 mm thick compressed asbestos gasket companion flanges as per table "E" complete.				
a		150 mm dia	Each	1.00	17459.00	17459.00
15.0		Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	3.00	613.00	1839.00

16.0		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	15.00	278.00	4170.00
17.0		Providing and fixing 'Y' strainer with CI body and S.S. strainer for outlet of OHT lines.(Terrace Level)				
a)		150 mm dia	Each	1.00	10124.00	10124.00
18.0		Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:				
a)		150 mm dia.	Each	4.00	6638.00	26552.00
III		HAND APPLIANCES (INTERNAL)				
		Note: All extinguishers shall carry ISI mark.				
1		Providing and fixing water based CO2 type extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve 30 cms long high pressure discharge hose, discharge nozzle, suspension bracket, ISI marked as per IS:934 finished externally with red enamel paint and fixed to wall with brackets complete with internal charges.				
a)		Capacity 9 lit.	Each	15	8000.00	120000.00
b)		Capacity 22.5 kg.(Trolley mounted)	Each	1	15000.00	15000.00
2		Providing and fixing CO2 extinguisher consisting of seamless MS cylindrical body squeeze lever discharge valve, internal discharge tube, 30 cms long high pressure discharge hose, discharge nozzle ISI marked as per IS 2878 including fixing with dash fasteners etc. complete.				
a)		Capacity 4.5 Kg	Each	15	5500.00	82500.00
3		Providing and fixing mechanical foam type (ISI marked) fire extinguishers consisting of welded M.S. cylindrical body squeeze lever discharge valve 30 cm long high pressure discharge hose, discharge nozzle, suspension bracket as per ISI marked finished externally with red enamel paint and fixed to wall with brackets complete with internal charger.				
a)		Capacity 9 lit.	Each	15	6500.00	97500.00
b)		Capacity 50 lit.(Trolley mounted)	Each	1	25000.00	25000.00
		TOTAL SUMMARY				
IV		SPRINKLER SYSTEM (INTERNAL)				

1.0		Providing and Fixing M.S. pipe to I.S. 1239 (Heavy class) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets, reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. Pipe upto 50 mm dia will be with threaded joints with holdtite and 65 mm dia and above will be with welded joint. The cost shall include the MS/GI structural supports as per approved drawings and specifications.				
a)		25 mm dia	Metre	1740.00	420.00	730800.00
b)		32 mm dia	Metre	270.00	500.00	135000.00
c)		40 mm dia	Metre	300.00	600.00	180000.00
d)		50 mm dia	Metre	420.00	700.00	294000.00
e)		65 mm dia	Metre	325.00	850.00	276250.00
f)		80 mm dia	Metre	240.00	1050.00	252000.00
g)		100 mm dia	Metre	96.00	1500.00	144000.00
h)		150 mm dia	Metre	590.00	1750.00	1032500.00
2.0		Providing and fixing 15 mm Chrome plated gunmetal sprinkler head with quartz bulb and set to operate at specified temperature pendent/upright/ side wall as per instruction.				
		Temperature of operation 68 deg..C K-80				
a)		Normal Responce Pendent type	Each	1077.00	245.00	263865.00
b)		Normal Responce Upright type	Each	10.00	245.00	2450.00
c)		Normal Responce Side wall	Each	10.00	334.00	3340.00
3.0		Providing & fixing inspecting testing assembly with drain valve arragement as per approved drawing..				
a)		50 mm dia	Each	3.00	7251.00	21753.00
4.0		Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)				
a)		25 mm dia	Each	3.00	557.00	1671.00

5.0		Providing and fixing electrically operated flow indicating switches System Sensor or Potter brand in sprinkler branch line on each floor with necessary junction box installed in accessible place.				
		80 mm dia	Each	3	3235.00	9705.00
c)		100 mm dia	Each	12	3235.00	38820.00
6.0		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	12	278.00	3336.00
7.0		Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	3	613.00	1839.00
8.0		Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E'				
c)		80 mm dia with lever	Each	18	1115.00	20070.00
		100 mm dia with lever	Each	12	1115.00	13380.00
d)		150 mm dia with lever	Each	21	1394.00	29274.00
9.0		Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:				
a)		150 mm dia.	Each	4.00	2231.00	8924.00
V		EXTERNAL FIRE HYDRANT				
1.0		Excavating trenches of required width for pipes, etc. including excavation for sockets and dressing of sides in hard/dense soil, ramming of bottom, depth upto 1.5 m including getting out the excavated soil and then returning the soil as required in layers not exceeding 200mm in depth including consolidating each deposited layer by ramming, watering, and disposal of surplus excavated soil as directed within a lead of 100 m.				
a)		Pipes, upto 300 mm dia	Cum	100.00	279.00	27900.00

2.0		Providing and fixing M.S pipes confirming to IS. 1239 heavy duty including all fittings like couplings, bends, elbows, offsets, blind flanges, plugs, tees, flanges (flanges as per table E), etc. threaded or welded (all type) joints as per detailed specifications as required, with a coat of red oxide primer and two or more coats of synthetic enamel paint of approved colour, cutting holes and chases in brick or RCC walls or floors and making good complete .				
a)		80 mm dia	Metre	10.00	1050.00	10500.00
b)		150 mm dia	Metre	200.00	1750.00	350000.00
3.0		Providing and applying one coat of 4 mm thick 'PYPKOTE' or COATEK anti rust pipe protection including approved primer as per manufacturers specifications and lap of 25 mm and fusing lam to make an impermeable layer on pipes in trenches or on structural/masonry members complete				
a)		80 mm dia	Metre	10.00	100.00	1000.00
b)		150 mm dia	Metre	200.00	128.00	25600.00
4.0		Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).	Each	4.00	5940.00	23760.00
5.0		Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	4.00	1885.00	7540.00
6.0		Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle)(Including cabinet M.S.structure support with primer & painting etc.)	Each	4.00	4049.00	16196.00

7.0		Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification.	Each	8.00	3837.00	30696.00
8.0		Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects.				
a)		80 mm dia with lever	Each	4.00	1115.00	4460.00
b)		150 mm dia with lever	Each	2.00	1394.00	2788.00
9.0		Providing and fixing anchor blocks of concrete 1:2:4 mix (1 cement : 2 coarse nominal size) for Fire pipe including necessary excavation, shuttering and centring, curing complete.(For irrigation line)	Cum	20.00	3841.00	76820.00
10.0		Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.				
a)		Four way	Each	1.00	20260.00	20260.00
VI	FIRE PUMPS& ACCESSORIES					
		(All pumps should be supplied with wearing and mechaical seal. Performance curve should be approved before placing the order. All pumps should be supplied with base frame)				
1		Providing and Fixing Wet Riser Pump and Sprinkler Pump Supplying and fixing single/double stage horizontal centrifugal pumping set with volute bronze impeller connected to a TEFC induction motor suitable for 410/440 volts, 3 phase , 50 cycles AC supply as per the details given below:				
a)		Capacity : 2850 LPM				

b)		Head : 100 meter				
c)		HP : 75 HP or as required.				
d)		No of stages : single/double				
e)		RPM : 2900				
f)		Mover : Electric Motor driven.				
g)		Material of Construction/Specification				
h)		Shaft & Sleeve: S.S- 410				
i)		Impeller : Bronze				
j)		Casing : CI				
k)		Bearing : Grease lubricated				
l)		Seal : Mechanical Seal				
m)		Quantity :	Set	2	450000.00	900000.00
2		Jockey Pump:				
		Providing,Fixing Supplying and fixing horizontal centrifugal pump with volute brozne impeller conntected to TEFC induction motor suitable for 400/410 Volts, 3 Phase, 50 Cycles , AC supply with the following specifications:				
a)		Capacity : 280 LPM				
b)		Head : 100 m				
c)		HP : 15 HP approx. or As required.				
d)		RPM : 2900				
e)		Mover : Electric Motor driven				
f)		Material of Construction:				
g)		Shaft & Sleeve : S.S- 410				
h)		Impeller : Bronze				
i)		Bearing : Grease lubricated				
j)		Seal - Mechanical seal.				
n)		Quantity :	Set	1	100000.00	100000.00
3		Providing,Fixing Diesel Engine Driven Fire Pump Fixing single stage horizontal centrifugal pumping set of the following specifications including vibration elimination pads and six cylinder , heat exchanger cooled engine with pressure reducing valve complete.				
a)		Capacity : 2850LPM				
b)		Head : 100 m				
c)		BHP : 180 approx. or As required.				
d)		RPM : 1450/2000 (pump and engine)				
e)		Mover : Diesel Engine.				

f)		Material of Construction:				
g)		Shaft & Sleeve : S.S- 410				
h)		Impeller : Bronze				
i)		Bearing : Grease, lubricated				
j)		Seal - Mechanical seal.				
m)		Quantity :	Set	1	500000.00	500000.00
4		Air Vessel for Fire Pump:				
		Providing,Fixing of air vessel of the following specifications				
a)		Diameter : 450 mm				
b)		Shell Thickness: 10 mm				
c)		Dish Ends : 12 mm				
d)		Height : 2000 mm				
e)		side				
f)		and two coats of epoxy coating inside.				
		(After surface				
g)		preparations)				
h)		Material of construction: M.S				
i)		Test Pressure: 20 kG/SQ.CM.				
j)		Size of Inspection flange:450 mm dia				
k)		Height of supporting legs: 400 mm				
l)		Quantity:	Each	1	35000.00	35000.00
		Note: Contractor should submit general arrangement drawings before fabrication of vessel and ultrosonic test report to be submitted on supply of vessel and test to be conducted at the presence of Plumbing-In-Charge.				
5		Providing and fixing cast iron dual plate wafer type non return valves PN 1.6 including nuts, bolts, 1.5 mm thick gasket companion flanges as per table 'E' etc. complete.				
a)		80 mm dia	Each	1	16500.00	16500.00
b)		150 mm dia	Each	4	20000.00	80000.00
c)		250 mm dia	Each	1	22500.00	22500.00
6		Providing and fixing cast iron butterfly valves conforming to PN1.6 I.S.13095 with "Lever" or gear operated, bolts, nuts, 3 mm thick insertion rubber gasket complete including companion flange as per Table 'E' all complete.				
a)		50 mm dia (lever operated)	Each	1	4500.00	4500.00

b)		80 mm dia (lever operated)	Each	1	5000.00	5000.00
c)		100 mm dia (lever operated)	Each	3	6500.00	19500.00
d)		150 mm dia (lever operated)	Each	9	8000.00	72000.00
e)		200 mm dia (gear operated)	Each	3	10500.00	31500.00
f)		250 mm dia (gear operated)	Each	5	13500.00	67500.00
7		Providing and fixing reselient rubber neoprene lined single vibration elimination connection with unit control suitable for raw water upto 45 deg.C. temperature working pressure 20 kg/sqcm.				
a)		80 mm dia	Each	1	5500.00	5500.00
b)		100 mm dia	Each	1	7000.00	7000.00
c)		150 mm dia	Each	3	8500.00	25500.00
d)		200 mm dia	Each	3	10000.00	30000.00
8		Providing and fixing black steel pipes IS 1239 (Heavy class) including all fittings like anchor fastners, couplings, bends, elbows, flange, tees, etc. Welded or flanged joints as required, painting as per specifications. cutting holes and chases complete.The cost shall include the MS/GI structural supports as per approved drawings and specifications.				
a)		50 mm dia	Metre	10	750.00	7500.00
b)		80 mm dia	Metre	8	1100.00	8800.00
c)		100 mm dia	Metre	8	1500.00	12000.00
d)		150 mm dia	Metre	80	2250.00	180000.00
e)		200 mm dia (IS-3589)	Metre	10	2650.00	26500.00
9		Providing and fixing black steel pipes to I.S. 3589 (7 mm thick) including all fittings fabrication of fitting like, anchor fastners, couplings, bends, elbows, tees, etc. welded or flanged joints as required, painting as per specifications, cutting.The cost shall include the MS/GI structural supports as per approved drawings and specifications.				
a)		250 mm dia (Delivery Header)	Metre	10	2650.00	26500.00
b)		300 mm dia (Suction Header)	Metre	10	3150.00	31500.00
10		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-20/ sq.cm.	Each	5	400.00	2000.00

11		Providing and fixing electrically operated dual type pressure switches with threaded connection for pressure vessel, complete suitable for 0-20 Kg/Sq.cm.	Each	4	8000.00	32000.00
12		Providing and fixing vibration elimination pads for pumps.				
a)		Type A (for Jockey pumps)	Set	1	5000.00	5000.00
b)		Type B (Main fire pumps)	Set	2	6000.00	12000.00
c)		Type C (for diesel pump)	Set	1	6000.00	6000.00
13		Providing and fixing 25 mm dia gun metal fitting for water level indicator gauge with isolation valve at top and bottom, heavy guage transparent polythylene tube of approx. 5 m length with colour indicator float clamped to teak board 100 mm wide x20 mm with graduation in KL.	Each	2	6500.00	13000.00
15		Providing and fixing liquid level controller for fire pump to cut off in case low level of water in tank including cables, pannel ,etc. and making necessary connection to panel and commissioning.	Each	1	2500.00	2500.00
16		Providing and fixing gunmetal installation valve with turbine type automatic alarm to be conn- ected with control valve ,drain valve ,test valve and piping as per manufacturer's specifications complete in all respects.				0.00
a)		150 mm dia	Each	2	15000.00	30000.00
17		Providing and Fixing bucket type suction strainer with M.S.flanged connection 750 mm dia and 900 mm deep suitable for 5700 lpm discharge fabricated from 8 mm thick M.S. plate and stainless steel 304 grade 60 mesh with S.S.Stiffnes complete including companion flanges etc. suitable for 250 dia inlet and 250 dia outlet including inside with rubberised paint and outside withtwo coats of enamel paint of approved shade after surface preparation.	Each	2	25000.00	50000.00
18		Providing and fixing Diesel engine driven pump exhaust ,M.S pipe class 'A'150 mm dia including fitting like flanges,bends,reducers ,etc. 50 mm thick glass wool insulation,aluminium cladding 21 gauge thick ,necessary excavation ,fixing of silencer connection at engine exhaust necessary supports ,backfilling ,cutting and making good bird proof and weather proof flap complete in all respects as directed.	Rmt	25	3500.00	87500.00

19		Providing and fixing C.I. foot valve including nuts, bolts, 1.5 mm thick compressed asbestos gasket, complete and companion flanges as per table "E" in all respects.				
a)		150 mm dia	Each	1	8000.00	8000.00
20		Providing and fixing blank flanges as per table 'E' including nuts, bolts, 3mm thick rubber gasket complete in all respects.				
a)		250 mm (Suction Header)	Each	2	2000.00	4000.00
b)		300 mm (Delivery Header)	Each	2	25000.00	50000.00
		Total C/f to Summary		Total NS Items [II]		8407459.00

BILL OF QUANTITIES						
HVAC WORKS						
Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
DSR ITEMS						
1.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with coke and salt) as required.	Set	4.00	3996.00	15984.00
2.0	5.9	Supplying and laying 25 mm x 5 mm. G.I. strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Joining shall be done by overlapping and with 2 sets of GI nut bolts & spring washer spaced at 50 mm)	RM	20.00	97.50	1950.00
3.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
4.0		Supplying, fabricating and installing following size of perforated perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	400.00	405.00	162000.00
ii	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	RM	150.00	464.00	69600.00
iii	4.1.3	300 mm width X 50 mm depth X 1.6 mm thickness	RM	300.00	677.00	203100.00
5.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
	9.1.30	3.5 X 300 sq. mm (70mm)	Each	16.00	867.00	13872.00
	9.1.24	3.5 X 95 sq. mm (45mm)	Each	4.00	366.00	1464.00
	9.1.22	3.5 X 50 sq. mm (35mm)	Each	14.00	262.00	3668.00
	9.1.20	3.5 X 25 sq. mm (28mm)	Each	16.00	191.00	3056.00
	9.1.33	4 X 16 sq. mm (28mm)	Each	8.00	188.00	1504.00
	9.1.32	4 X 10 sq. mm (25mm)	Each	16.00	146.00	2336.00
6.0	7.5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.5.4	Above 185 sq. mm and upto 400 sq. mm	RM	600.00	44.00	26400.00
7.0	7.8	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	RM	350.00	16.50	5775.00
	7.8.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	RM	800.00	38.50	30800.00
	7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	RM	1700.00	72.50	123250.00
		Total Carried to Summary				688759.00
NON DSR ITEMS						
8.0		Lower Ground floor:				
		Supply, Installation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	5.00	2000.00	10000.00
9.0		Ground floor:				
		Supply, Installation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	5.00	2000.00	10000.00
10.0		First floor:				
		Supply, Installation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	4.00	2000.00	8000.00
11.0		Second floor:				
		Supply, Installation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	5.00	2000.00	10000.00
12.0		Third floor:				
		Supply, Installation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	2.00	2000.00	4000.00
		16 A MPCB	Nos.	1.00	1750.00	1750.00
13.0		Ventilation:				
i		Auto Star Delta starter of 100 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	2.00	100000.00	200000.00
ii		Auto Star Delta starter of 60 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	2.00	80000.00	160000.00
iii		Auto Star Delta starter of 40 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	4.00	60000.00	240000.00
iv		Auto Star Delta starter of 25 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	4.00	45000.00	180000.00
v		Auto Star Delta starter of 10 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	6.00	17500.00	105000.00
vi		Auto DOL starter of 3 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	4.00	10000.00	40000.00
14.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
		4 X 6 sq. mm	Each	16.00	125.00	2000.00
		4 X 4 sq. mm	Each	6.00	100.00	600.00
		4 X 2.5 sq. mm	Each	12.00	85.00	1020.00
15.0		Supplying testing & commissioning for following size of XLPE aluminium conductor armoured cable of 1.1 KV grade as required.				
i		3.5 Core 300 sq. mm	RM	1000.00	1407.00	1407000.00
		3.5 Core 95 sq. mm	RM	300.00	497.00	149100.00
		3.5 Core 50 sq. mm	RM	500.00	295.40	147700.00
		3.5 Core 25 sq. mm	RM	300.00	188.70	56610.00
		4 X 16 sq. mm	RM	200.00	151.90	30380.00
		4 X 10 sq. mm	RM	600.00	140.70	84420.00
		4 X 6 sq. mm	RM	350.00	112.70	39445.00
		4 X 4 sq. mm	RM	150.00	91.00	13650.00

		4 X 2.5 sq. mm	RM	100.00	80.00	8000.00
16.0		HVAC Panel				
		Incoming:				
		Two (2) Nos. 1600A FP ACB EDO Type				
		Metering:				
		Two (2) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		Two (2) Nos. (0-1600A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		Two (2) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Coupler:				
		2000A, FP ACB EDO Type				
		Bus Bar:				
		2000A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each. 800A TPN MCCB				
		Four (4) Each. 250A TPN MCCB				
		Four (4) Each. 125A TPN MCCB				
		Four (4) Each. 63A TPN MCCB				
		Six (6) Each. 32A TPN MPCB				
		Two (2) Each. 16A TPN MCB	Set	1.00	1500000.00	1500000.00
17.0		Ventilation Panel				
		Incoming:				
		One (1) Nos. 63A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each. 32A TPN MPCB				
		Two (2) Each. 16A TPN MCB	Set	1.00	25000.00	25000.00
II		AIR CIRCULATION SYSTEM:				
1.0		AIR HANDLING UNIT:				
		Supply, installation, testing and commissioning of factory fabricated Double Skin Chilled/Hot Water sectionalized Air-handling unit horizontal type fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts $\pm$ 10%, 50 Hz $\pm$ 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers. The AHU panels shall be insulated with 43 +/- 2 mm thick insulated with CFC free (PUF panel) & 43 Kg/m ³ density. The motor & blower assembly shall be mounted on Aluminium extruded section only. Self adhesive coated neoprene gasket to be provided between panels and structure of the AHU to ensure the entire housing is airtight. The fan shall be fitted with factory installed non-invasive airflow monitoring station for flow verification (by fan manufacturer), and shall be a standard part of fan assembly. The complete AHU shall conform to standard specification. The face velocity across cooling coil shall be limited to 152 MPM maxm. Expansion bellows with spacers shall be provided at pipe connections. Capacity of Air-handlers shall be as follows:				
		Floor Mounted AHUs (6 Rows coil):				
		Lower Ground floor:				
		5500cfm, 11TR, 5HP, 50mmSP	Nos	1.00	4,95,000.00	4,95,000.00
		5800cfm, 14TR, 5HP, 50mmSP	Nos	1.00	5,22,000.00	5,22,000.00
		7700cfm, 26TR, 5HP, 50mmSP	Nos	1.00	6,93,000.00	6,93,000.00
		7700cfm, 25TR, 5HP, 50mmSP	Nos	1.00	6,93,000.00	6,93,000.00
		9000cfm, 19TR, 5HP, 50mmSP	Nos	1.00	8,10,000.00	8,10,000.00
		Ground floor:				
		5800cfm, 17TR, 5HP, 50mmSP	Nos	1.00	5,22,000.00	5,22,000.00
		7700cfm, 29TR, 5HP, 50mmSP	Nos	1.00	6,93,000.00	6,93,000.00
		7700cfm, 23TR, 5HP, 50mmSP	Nos	1.00	6,93,000.00	6,93,000.00
		7700cfm, 25TR, 5HP, 50mmSP	Nos	1.00	6,93,000.00	6,93,000.00
		13500cfm, 40TR, 10HP, 50mmSP	Nos	1.00	12,15,000.00	12,15,000.00
		First floor				
		5000cfm, 17TR, 5HP, 50mmSP	Nos	1.00	4,50,000.00	4,50,000.00
		11200cfm, 22TR, 5HP, 50mmSP	Nos	1.00	10,08,000.00	10,08,000.00
		7000cfm, 23TR, 5HP, 50mmSP	Nos	1.00	6,30,000.00	6,30,000.00
		Second floor:				
		4200cfm, 11TR, 5HP, 50mmSP	Nos	1.00	3,78,000.00	3,78,000.00
		7000cfm, 20TR, 5HP, 50mmSP	Nos	1.00	6,30,000.00	6,30,000.00
		9500cfm, 25TR, 7.5HP, 50mmSP	Nos	1.00	8,55,000.00	8,55,000.00
		14600cfm, 41TR, 10HP, 50mmSP	Nos	1.00	13,14,000.00	13,14,000.00
		18000cfm, 50TR, 10HP, 50mmSP	Nos	1.00	16,20,000.00	16,20,000.00
		Third floor				
		3500cfm, 10TR, 3HP, 50mmSP	Nos	1.00	3,15,000.00	3,15,000.00
		7500cfm, 22TR, 7.5HP, 50mmSP	Nos	1.00	6,75,000.00	6,75,000.00
		15000cfm, 38TR, 10HP, 50mmSP	Nos	1.00	13,50,000.00	13,50,000.00
2.0		Ceiling suspended AHUs (6 Rows coil):				
		First floor				
I		4500cfm, 12TR, 5HP, 40mm SP	Nos	1.00	4,05,000.00	4,05,000.00
3.0		CASSETTE TYPE UNIT				
		Supply, installation, testing & commissioning Hydronic Ceiling Cassette type units, each complete with 2 Rows deep chilled water cooling coil, multi blade centrifugal fan, cleanable filters, insulated condensate drain pans with drain pump& drain pump failure alarm, pipe connections through copper pipes, Infraed, remote control, LCD display, 3 fan speed plus auto fan 4 direction air flow, auto swing louver etc. condensate drain connections, with required Set of ball valves with strainers (supply), without strainers (Return). All units shall be suitable for 220 $\pm$ 10%volts, 50 cycles single phase power supply etc. complete as per specification.				
I		1200cfm, 3TR	Nos	1.00	1,08,000.00	108000.00
II		1000cfm, 2.5TR	Nos	10.00	90,000.00	900000.00
III		600cfm, 1TR	Nos	4.00	54,000.00	216000.00
4.0		Split Type AC units				
		Supply, installation, testing and commissioning of inverter split type AC units with Hi wall indoor units complete with finned coil, fan section with motor, air filters, filter box, double drain pan, wiring & accessories, outdoor air cooled condenser units with insulated interconnected copper piping with wiring, MS stand etc and all accessories, complete as required (For UPS Rooms)				
		600cfm, 1.5 TR	Nos	1.00	26,500.00	26500.00
5.0		Air cooled Split type Precision cooling units (PEX) for control rooms of computerized equipment:				
		Supply, installation, testing and commissioning of split type Air-conditioning unit complete in all respect as required, comprising of following:				
		Air cooled condensing unit consisting copper tube aluminium finned condenser coil, air cooled by suitable size low speed fan, all mounted in heavy gauge sheet steel enclosure with protective painting.				
		Evaporating Unit consisting of copper tube aluminium finned high transfer cooling coil, refrigerant distributor and thermostatic expansion Valve along with blower, filters and drain pan all in heavy gauge sheet steel metal enclosure with protective painting.				

		Installation, testing and commissioning of insulated liquid and suction copper refrigerant piping of adequate size along with necessary fittings to interconnect the condensing unit and the evaporating unit. (Average length 10.0 mtrs. per unit).				
		Providing and fixing M.S. structural support for condensing unit with vibration isolator pad in-between support and structure and vibration isolation suspender and pads for evaporating units.				
		Complete electrical work for the above units including interconnecting cabling/wiring from the MCBs near the room units to outdoor units complete in all respect including earthing.				
		Providing, fixing and testing 25 mm /32 mm dia. PVC drain piping for condensate complete with all fittings including 2 layers of 6 mm thick of polyurethane sheet over PVC pipe. (Average length 5.0 mtrs per unit).				
		Direct expansion refrigerant units with following Net Sensible cooling capacity (@ 21 Deg. C +/- 2 inside temp. , RH : 50+/-5%) , Bottom/Top discharge type, Precision DEX unit consisting of " In-Floor" EC fans for higher power savings , Intelligent energy logic (team mode, load sharing modes, cascade effect etc.) based controller to insure that all PEX units work together as a single system to cater to the load , all units should reduce fan speed together at part load for power savings, inlet filter section EU-4, unit should be able to deliver high cfm per TR, A -type cooling Coil, Heater banks and Infrared Humidifier should be part of the PEX unit for steam generation within seconds to achieve precise & faster relative humidity inside the space, condensate drain pan, graphical display of RH and temp. , programmable control & recording unit, The unit shall be suitable for operation on 415+10% V 50 Hz AC supply. The Display panel shall display date, time, actual & set values, operating conditions, signaur as per direction of Engineer-in-charge. anising to be done conforming to IS:4759				
i		10 TR	Nos	2.00	6,00,000.00	1200000.00
ii		8 TR	Nos	1.00	4,80,000.00	480000.00
III		AIR OZONE SYSTEM:				
1.0		Supply, Installation , testing , commissioning and handing over of the imported Air Ozone System (UL Listed for smoke & fire - UL 2043) for maintaining indoor Air Quality. The components of the system must be in strict conformity with the specifications.and shall be including freight from Airport to site ,Insurance,Lifting,Shifting etc.as required . Single phase power supply for the Ozone Generators will be provided near the controller by others. The prices to include all connected wiring between the duct mounted ozone generator, VOC sensor / Controller. The power supply to the Ozone monitor will be provided near the respective equipment by others . But the wiring between the ozone monitor / switch and controller will be included in the scope.				
		Duct mounted ozone generators suitable for the following floor area mentioned in the basis of design .				
		Lower ground Floor				
i		Lecture hall - 7700 CFM	SET	2.00	6,13,600.00	1227200.00
ii		Discussion Room - 5800 CFM	SET	1.00	5,90,800.00	590800.00
iii		Common Room -5500 CFM	SET	1.00	5,90,800.00	590800.00
iv		Multi- purpose hall - 9000 CFM	SET	1.00	6,77,300.00	677300.00
		Ground Floor				
i		Lecture hall - 7700 CFM	SET	3.00	6,13,600.00	1840800.00
ii		Network Room - 13500 CFM	SET	1.00	6,77,300.00	677300.00
iii		Lecture Hall - 5800 CFM	SET	1.00	5,90,800.00	590800.00
		First Floor				0.00
i		Lecture hall - 7000 CFM	SET	1.00	6,13,600.00	613600.00
ii		Lecture hall - 5000 CFM	SET	1.00	5,90,800.00	590800.00
		Second Floor				0.00
i		Lecture hall - 7000 CFM	SET	1.00	6,13,600.00	613600.00
ii		Lecture hall - 4200 CFM	SET	1.00	5,61,600.00	561600.00
iii		Lecture hall - 14600 CFM	SET	1.00	7,23,000.00	723000.00
iv		Lecture hall - 18000 CFM	SET	1.00	7,72,300.00	772300.00
v		Multi- purpose hall - 9500 CFM	SET	1.00	6,77,300.00	677300.00
		Third Floor				0.00
i		Lecture hall - 3500 CFM	SET	1.00	5,61,600.00	561600.00
ii		Lecture hall - 7500 CFM	SET	1.00	6,13,600.00	613600.00
iii		Multi- purpose hall - 15000 CFM	SET	1.00	6,77,300.00	677300.00
IV		PIPING:				
1.0		Chilled Water Piping:				
		Supplying, laying, fixing, testing & commissioning MS class 'C' pipes. For fixing valves, strainers and accessories pipes cut to required length with necessary, clamps, supports, antivibration pads, hangers, fittings such as bends, tees, reducers, flange				
		Mild steel pipes:				
i		250 mm dia MS pipes	RM	60.00	2,500.00	150000.00
ii		200 mm dia MS pipes	RM	20.00	2,350.00	47000.00
iii		125 mm dia MS pipes	RM	20.00	2,000.00	40000.00
iv		100 mm dia MS pipes	RM	10.00	1,800.00	18000.00
v		80 mm dia MS pipes	RM	65.00	1,550.00	100750.00
vi		65 mm dia MS pipes	RM	75.00	1,300.00	97500.00
vii		50mm dia MS pipes	RM	55.00	975.00	53625.00
viii		40mm dia MS pipes	RM	15.00	850.00	12750.00
ix		32mm dia MS pipes	RM	50.00	700.00	35000.00
x		25mm dia MS pipes	RM	150.00	625.00	93750.00
xi		20mm dia MS pipes	RM	20.00	600.00	12000.00
2.0		Supply and Installation of PVC Pipe (4kg) for AHU Drain & Fresh air connection for Cassette units of the following sizes				
i		40 mm dia PVC pipes	RM	60.00	900.00	54000.00
ii		32 mm dia PVC pipes	RM	60.00	800.00	48000.00
3.0		Supply and erection of butterfly valves as per the specifications. The valves shall be as per BS6755 part -1 for leak rate. The valve seat material shall be with nitrile rubber NON- Corrosive type. (PN-16 rated)				
i		80 mm dia	Nos	8.00	4,000.00	32000.00
ii		65mm dia	Nos	20.00	3,650.00	73000.00
iii		50mm dia	Nos	14.00	3,250.00	45500.00
iv		40mm dia	Nos	2.00	3,175.00	6350.00
4.0		Providing and fixing in position Ball Valve set comprising with strainer.				
i		20mm dia	Set	4.00	3,000.00	12000.00
ii		25 mm dia	Set	11.00	3,500.00	38500.00
5.0		Self Dynamic balancing valves				
		Supply, Installation, testing and commissioning of electronic, Self-balancing, Pressure independent type dynamic balancing Valve with integrated 2 way modulating Control valves in a single body. The vavles accept 2-10V DC or 4-20 ma and shall be capable of providing 4-20 ma 2-10V DC flow feedback signal to the control system. Each vavles should have 39(for dai below 40mm & flow upto 22GPM) & 51 (for dia. above 25 mm size & flow more than 22 GPM) adjustable maximum flow rate setting to enable flow limitation and balancing to the coil or zones that the valves are controlling, all actuators shall be microprocessor based with a self-calibrating feature The actuator shall be capable of accepting 2- 10V DC, 4-20 ma electric signal. The valve actuator shall be equipped to provide actual flow feedback signal to the BMS/control system. The flow feedback provision shall be permanently available on the actuator. The minimum close off pressure of actuator must be 1.5 times shut off head of pump as per specifications of following sizes:				
i		25/32/40mm dia (upto 37 USGPM flow rate)	Nos	1.00	35,000.00	35000.00
ii		50/65/80mm dia (upto 113 USGPM flow rate)	Nos	21.00	50,000.00	1050000.00
6.0		Providing and fixing in position Y strainer				
i		80 mm dia pipe	Nos	4.00	4,000.00	16000.00
ii		65mm dia pipe	Nos	10.00	3,650.00	36500.00
iii		50mm dia pipe	Nos	7.00	3,250.00	22750.00
iv		40mm dia pipe	Nos	1.00	3,175.00	3175.00
7.0		Providing and fixing in position Dial type Pressure gauge with gun metal gate valve, calibrated in metric & British units	Nos	44.00	900.00	39600.00

8.0		Providing and fixing in position Mercury in glass thermometers with V groove for protection	Nos	44.00	350.00	15400.00
9.0		Providing and fixing in position Auto air purging valves				
i		15 mm dia	Nos	44.00	900.00	39600.00
		INSULATION CHILLED WATER				
10.0		Piping insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
i		250 mm dia MS pipes	RM	60.00	2,500.00	150000.00
ii		200 mm dia MS pipes	RM	20.00	1,750.00	35000.00
iii		125 mm dia MS pipes	RM	20.00	1,150.00	23000.00
iv		100 mm dia MS pipes	RM	10.00	980.00	9800.00
v		80 mm dia MS pipes	RM	65.00	800.00	52000.00
vi		65 mm dia MS pipes	RM	75.00	650.00	48750.00
vii		50mm dia MS pipes	RM	55.00	550.00	30250.00
viii		40mm dia MS pipes	RM	15.00	485.00	7275.00
ix		32mm dia MS pipes	RM	50.00	450.00	22500.00
x		25mm dia MS pipes	RM	150.00	410.00	61500.00
xi		20mm dia MS pipes	RM	20.00	400.00	8000.00
11.0		Butterfly Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
i		80 mm dia	Nos	8.00	845.00	6760.00
ii		65mm dia	Nos	20.00	725.00	14500.00
iii		50mm dia	Nos	14.00	590.00	8260.00
iv		40mm dia	Nos	2.00	530.00	1060.00
12.0		Ball valve insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
i		20mm dia	Set	4.00	445.00	1780.00
ii		25 mm dia	Set	11.00	445.00	4895.00
13.0		Self Dynamic balancing valves				
		Pressure independent type dynamic balancing Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
i		25/32/40mm dia (upto 37 USGPM flow rate)	Nos	1.00	500.00	500.00
ii		50/65/80mm dia (upto 113 USGPM flow rate)	Nos	21.00	800.00	16800.00
14.0		Y-stainer insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
i		80 mm dia pipe	Nos	4.00	845.00	3380.00
ii		65mm dia pipe	Nos	10.00	725.00	7250.00
iii		50mm dia pipe	Nos	7.00	590.00	4130.00
iv		40mm dia pipe	Nos	1.00	530.00	530.00
15.0		Providing and fixing in position Dial type Pressure gauge with gun metal gate valve, calibrated in metric & British units	Nos	44.00	900.00	39600.00
16.0		Providing and fixing in position Mercury in glass thermometers with V groove for protection	Nos	44.00	350.00	15400.00
17.0		Providing and fixing in position Auto air purging valves				
		15 mm dia	Nos	44.00	900.00	39600.00
18.0		Supply & insulation with Nitril rubber insulation of 32mm thick	Sq mt	100.00	2,500.00	2,50,000.00
V		DUCTING:				
1.0		Sheet Metal Duct:				
		Supplying, fabricating, installing and testing of factory fabricated sheet metal ducting complete as per SMACNA with splitter damper, duct damper, vanes etc. as per specifications and approved shop drawing complete as required.				
		Air-conditioning Ducting :				
		Galvanized sheet steel				
		26 SWG	SQMT	935.00	550.00	514250.00
		24 SWG	SQMT	1950.00	650.00	1267500.00
		22 SWG	SQMT	890.00	750.00	667500.00
		20 SWG	SQMT	230.00	850.00	195500.00
		18 SWG	SQMT	150.00	1,000.00	150000.00
2.0		Supplying, installing, and testing of GI volume control damper within ducts to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per approved shop drawings.	SQMT	8.00	5,500.00	44000.00
3.0		Supply, installation & testing of UL listed smoke cum fire dampers of atleast 90 minute fire rating and as per the specifications as detailed earlier in the relevant sections. The fire dampers shall be located in the supply/return air ducts/walls, at all fire rated crossovers (shaft/walls etc.).				
i		Actuator operated Smoke cum fire dampers (as per actual sizes from drawings)	SQMT	30.00	30,000.00	900000.00
4.0		Supply Air Diffuser				
		Supplying, fixing and balancing of square supply air diffusers, air distribution grid for straightening the air flow through the collar and register and removable key-operated volume control dampers. Complete as per specification and drawing				
i		Powder Coated Aluminium square diffuser with volume control damper	SQMT	85.00	10,500.00	892500.00
5.0		Return Air Diffuser				
		Supplying & fixing of square return air diffusers, air distribution grid for straightening the air flow through the collar and register without volume control dampers. Powder Coated Aluminium square diffuser without volume control damper	SQMT	78.00	4,500.00	351000.00
6.0		Return Air Grilles:				
		Supplying, installing, testing and balancing of return air grilles (Linear/single louvred) with volume control dampers of various sizes. Each grill shall have be with fixed horizontal front bar at 15 deg. deflection, complete as per specification and drawing.				
i		Powder Coated linear Aluminium grilles with volume control damper (for exhaust of toilets).	SQMT	15.00	15,000.00	225000.00
7.0		Fresh Air Louvers:				
		Supplying, installing and balancing of fresh/exhaust air anodized aluminum intake louvers with bird screen & aluminum volume control damper, complete as per specification & drawings				
i		Fresh Air Louvers (With bird screen & VCD)	SQMT	5.00	12,500.00	62500.00
ii		Exhaust Air Louvers (with birdscreen but Without VCD)	SQMT	2.50	6,500.00	16250.00
8.0		Air Measuring Stations				
		Supplying, installing, testing and commissioning of air measuring stations in each AHU room for fresh air comprising factory built honeycomb air straightener, volume control damper with 230/24 Volts modulating actuator, air pressure pickups and factory calibrated controller	Nos	22.00	1,25,000.00	2750000.00
VI		INSULATION:				
1.0		Acoustic Lining of Ducts:				
		Supplying, & fixing of rigid fibre glass acoustic lining within supply air ducts as per the specifications. All ducts shown cross hatched on the approved shop drawings shall be provided with acoustic lining of fibre glass insulation as per the specifications.				
i		25mm thick acoustic lining.	SQMT	500.00	650.00	325000.00
2.0		Supply, fixing & testing of Acoustic silencers in return air passage within AHU rooms capable of noise reduction by 10db.				
i		22G GSS with 50/100mm thk acoustic lining in acoustic silencers	SQMT	20.00	1,000.00	20000.00
3.0		Thermal Insulation:				
		Supplying, installing of external thermal insulation on supply & return air ducts with approved sample of closed cell insulation class "O" rating, prelaminated with aluminium foil & density complete as per specifications.				
i		19 mm thick insulation.	SQMT	3100.00	1,600.00	4960000.00
4.0		Roof Exposed Insulation:				
		Supply, installation, testing and commissioning of 70 mm thick XPS Insulation having density of 32kg	SQMT	3325.00	1,200.00	3990000.00
VII		VENTILATION SYSTEM:				
		Supply installation, testing & commissioning of UL listed direct drive Tubeaxial fan . Fans shall be AMCA certified for air performance and suitable for installation in any position (Horizontal or Vertical). The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall strictly adhere to the attached Specifications.				
1.0						
i		Axial flow fans for liftwell pressurization 8000cfm, 25mm SP, 3HP 415±10% volts 50Hz power supply	Nos	1.00	2,40,000.00	240000.00

2.0		Supply, installation, testing & commissioning of UL listed belt drive SISW centrifugal backward inclined type fan with weather proof cabinet . The fans shall be AMCA certified for air performance. The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall strictly adhere to the attached Specifications.				
i		SISW fans with weather proof cabinet for toilet exhaust 7200, 25mm SP, 3HP 415±10% volts 50Hz power supply	Nos	1.00	3,00,000.00	300000.00
ii		SISW fans with weather proof cabinet for toilet exhaust 8000, 25mm SP, 3HP 415±10% volts 50Hz power supply	Nos	2.00	3,50,000.00	700000.00
		Total Carried to Summary				5,82,84,145.00

BILL OF QUANTITIES						
SECTION-F: SOLAR ENERGY						
Sr. No.	DSR 2012	Item Description	Unit	Qty	Unit Rate in Rs.	Amount in Rs.
A		Bill of Quantities				
1		Solar Panel 12V-125Wp	Nos.	136		
2		Module Mounting Structure	Nos.	136		
3		Battery Bank 120V-600Ah	Nos.	45		
4		Battery Protection Panel	Nos.	1		
5		PCU 120V DC ,Three Phase 25 KVA AC	Nos.	1		
6		D.C Distribution Board	Nos.	1		
7		AC Breaker Box with Auto Change Over and six numbers output	Nos.	1		
8		PV Aarray Junction Boxes	Lot	1		
9		Main Junction box	Nos.	1		
10		DC Cables set	Set	1		
11		Earthing	Set	1		
12		Lighting Arrestors	Set	1		
13		Accessories-Danger, Display boards etc	Lumpsum	1		
V		Rating 17 KW	Set	1	3500000.00	35,00,000.00
		GRAND TOTAL				35,00,000.00

BILL OF QUANTITIES SECTION-G: FIRE DETECTION SYSTEM						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	QTY	UNIT	RATE	AMOUNT
		Non DSR				
I		FIRE DETECTION				
1		SITC of FIRE ALARM CONTROL PANEL : Microprocessor based 7 loop fire alarm control panel fully networkable, expandable with each loop capable of taking 127 devices expandable upto 10 loop, 8 line x 40 character alpha-numeric liquid crystal display. The panel shall be soft addressable type. The Panel should be able to store 10,000 log events in it's memory. The panel shall be able to give pin point location of all fire / fault conditions. Further, the panel must be able to automatically switch off respective control switches when ever any alarm is triggered. The panel shall have in built rectifier, Loop cards, LCD unit to indicate Fire / Fault Signal with address and analog output, option of built in printer to log all fire or fault events complete in all respects, integral SMF lead acid batteries with sealed cells of 24 V capable of running for a minimum of 8 hours with integral battery charger complete as required and as per specification VDS & CNBOP approved.	No.	1	4,25,000.00	4,25,000.00
2		SITC of REPEATER PANEL : With 2 line / 40 characters alpha numeric LCD display of FACP status information with commands such as reset and mute, complete as required.	No.	1	36,000.00	36,000.00
3		SITC of HEAT DETECTORS : Analogue, Soft Addressable, Intelligent heat detector with decentralized intelligence, automatic function self-test, CPU Failure mode, alarm and data memory, alarm indicator and with In-built Isolator, complete with base as required.	No.	270	3,000.00	8,10,000.00
4		Supply, Installation, Testing and Commissioning of MULTICRITERIA DETECTORS : Analog, Soft Addressable, Intelligent, Multicriteria detector with decentralized intelligence with integral optical detector and heat detector, Dual Optical with Forward and Backward scattering & One Thermal Chamber type and with In-built Isolator, complete with base as required.	Nos.	271.00	4,500.00	12,19,500.00
5		SITC of MANUAL CALL POINT : Analog, Soft Addressable, Manual Call Point with integrated Isolator, complete as required.	No.	15	3,300.00	49,500.00
6		SITC of RESPONSE INDICATORS : Local make response indicator complete as required.	No.	57	110.00	6,270.00
7		SITC of MONITOR MODULES : Addressable transponder / Monitor Modules complete as required.	No.	15	3,300.00	49,500.00
8		SITC of CONTROL MODULES : Addressable transponder / Control Modules complete as required.	No.	35	2,400.00	84,000.00
9		SITC of HOOTER CUM STROBES : Addressable Hooter cum Strobe complete as required.	No.	15	4,000.00	60,000.00
10		SITC of SIREN : Local make Addressable siren with high intensity having range of 1 km for out door application etc. complete as required.	No.	1	7,500.00	7,500.00
11		SITC of 6 W recessed ceiling mounted speakers with following features:- Built-in 100 / 70 V LMT, metal speaker with metal grill, SPL 1W/1m = 92dB, SPL@Full power = 97 dB, 180 deg dispersion, frequency range 120-17, 500 Hz as per BS 6840 complete with necessary mounting hardware & accessories.	No.	259	950.00	2,46,050.00
12		SITC of DSP Based Audio Controller System for Public Address & Voice evacuation with:- 8 zones, class AB wiring, 16 monitored speaker circuits, On-panel display & zone keys, 5 audio inputs, Integrated & monitored Fireman microphone, Digital message players up to 45 min for Automatic Voice Evacuation, Event log incident data records upto 2047 incidents, amplifier monitoring with switchover to back up amplifier. Compliance with EN 60849 , BS 5839 part 8 & EN 54-16 standards	No.	1	4,75,000.00	4,75,000.00
13		SITC of 480 watts RMS Class AB Audio Power Amplifier with following features: 480W RMS , amplifier output 100V/70V/40Ohm, Supply Input 230/240V 50 Hz, DC 24V, Short Circuit protection, Thermal Shutdown, Overload protection, Inbuilt Ventilating Fans, THD< 0.5%, AC Dc Fuses, SNR>80 Db	No.	4	90,000.00	3,60,000.00
14		Supplying and drawing Copper Conductor, MICA taped, Halogen Free of 2 x 1.5 sq.mm cable including all supports required for instalation as per requirement on surface including all end terminations complete in all respect for succesful commissioning for fire detection and PAVA system.	RM	4000	250.00	10,00,000.00
		TOTAL SUB HEAD LOW VOLTAGE				4828320.00

CONSTRUCTION OF MECHANICAL SCIENCES BUILDING (PHASE-II) AT N.I.T. ROURKELA			
ABSTRACT OF COST			
	DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
1	CIVIL WORKS	266099311.80	81131324.89
2	PLUMBING WORKS	3373096.35	5477781.36
3	ELECTRICAL WORKS	12744192.50	34135817.00
4	FIRE FIGHTING WORKS	89893.00	6889415.00
5	HVAC	360960.00	84439235.00
6	SOLAR ENERGY		6000000.00
7	FDA		7729030.00
	SUB TOTAL	282667453.65	225802603.26
G.TOTAL		508470056.90	

CONSTRUCTION OF MECHANICAL SCIENCES BUILDING (PHASE-II) AT N.I.T. ROURKELA			
CIVIL WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012 items	Non Scheduled items
I	EARTH WORK	2136416.60	
II	CONCRETE WORK	4673168.62	
III	REINFORCED CEMENT CONCRETE	173847744.17	
IV	BRICK WORK	9657229.03	
V	STONE WORK	11475050.21	
VI	MARBLE WORK	7036110.21	
VII	WOOD WORK	647550.49	
VIII	STEEL WORK	6138669.44	
IX	FLOORING	29091843.46	
X	ROOFING	5281617.07	
XI	FINISHING	11719892.06	
XII	ROAD WORK	305257.83	
XIII	DRAINAGE	40381.50	
IX	ALUMINIUM WORK	115836.20	
X	WATER PROOFING	3932544.91	
XI	NON SCHEDULE ITEMS	-	81131324.89
	TOTAL	266099311.80	81131324.89
		A-1	A-2

MECHANICAL SCIENCES BUILDING						
BILL OF QUANTITIES						
CIVIL WORKS						
S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
I EARTH WORK 2.0						
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as per as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cu.M	8956.04	129.35	1158463.52
2	2.7	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.7.1	Ordinary Rock	Cu.M	895.60	197.75	177104.90
3	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 Sq.M on plan) including dressing of sides and ramming ob bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, withina lead of 50m.				
	2.8.1	All kinds of soil	Cu.M	803.50	130.80	105097.68
4	2.9	Excavation work by mechanical means (Hydraulic excavatory)/manual means in foundation trenches or drains not exceeding 1.5m in width or 10 Sq.M on plan including dressing of sides and ramming or bottoms lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.				
	2.9.1	Ordinary Rock	Cu.M	80.35	212.00	17034.20
5	2.24.1	In or under water and/or liquid mud, includig pumping out water as required.	metre depth	3.20	26.16	83.71
6	2.24.2	In or under foul position,including pumping out water as required.	metre depth	3.20	32.70	104.64
7	2.25	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 up to 1.5 m.	Cu.M	6955.44	83.80	582865.87
8	2.26	Extra for every additional lift of 1.5 m or part thereof in:				
i)	2.26.1	All kinds of soil	Cu.M	895.60	34.60	30987.89
ii)	2.26.2	Ordinary or hard rock	Cu.M	89.56	62.00	5552.72
9	2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	Cu.M	200.00	110.75	22150.00
10	2.28	Surface dressing of the ground including removing vegetation and in equalities not exceding 15cm dep and disposal of rubbish, lead upto 50m and lift upto 1.5m.				
	2.28.1	All kinds of soil.	100 Sq.M	60.54	935.25	56624.24
11	2.32	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	100 Sq.M	43.59	247.00	10767.22
12	2.36	Deduct for disposed soil levelled and neatly dressed.	Cu.M	1200.00	-25.35	-30420.00
					TOTAL	2136416.60
				TOTAL [I]		2136416.60
II CONCRETE WORK 4.0						
13	4.1	Providing and laying in position cement cncrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level.				
	4.1.8	1:4:8 (1 cement :4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cu.M	1217.91	3593.30	4376316.00
14	4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapetx,coping, bed blocks, anchor blocks, plain window sills, fillets, etc. upto floor five level, excluding the cost of centring, shuttering and finishing:				
	4.2.3	1:2:4 (1 cement :2 coarse sand : 4 graded stone 20 mm nominal size)	Cu.M	16.36	5272.40	86256.46
	4.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Cu.M	13.18	4782.35	63031.37
15	4.10	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)	Sq.M	191.91	207.55	39830.26
16	4.12	Extra for providing and mixing proofing material in cement concrete work @ 1 Kg per 50kg of cement as per manufacture's specification.	per 50 kg cement	49.90	35.35	1763.82
16	4.13	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	Sq.M	191.91	96.65	18547.79

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
17	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate 20mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth .	Sq.M	258.08	338.75	87422.91
					TOTAL	4673168.62
				TOTAL [II]		4673168.62
III REINFORCED CEMENT CONCRETE 5.0						
18	5.2	Reinforced cement concrete work in wall (any thickness) including attached pilasters, buttresses , plinth and string courses, fillets, columns, pillars,piers,abutment ,posts and struts etc,up to floor five level excuding cost of centering ,shuttering finishing and reinforcement.				
	5.2.2	1:1.5:3 (1 cement :1.5 coarse sand :3 graded stone aggregate 20 mm nominal size)	cum	70.00	5735.75	401502.50
19	5.9	Centring and shuttering including strutting, proppintg etc. and removal of form for:				
i	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sq.M	386.34	166.90	64480.15
ii	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	Sq.M	176.58	285.15	50351.79
iii	5.9.3	Suspended floors,roofs, landings, balconies and access platform.	Sq.M	15415.75	311.20	4797381.12
iv	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sq.M	14627.78	262.25	3836135.07
v	5.9.6	Columns, pillars, piers, abutments, posts and struts	Sq.M	9958.47	365.30	3637828.73
vi	5.9.7	Stairs, (excluding landings) except spiral staircases	Sq.M	392.26	326.30	127993.13
vii	5.9.14	Extra for shuttering in circular work (20% of respective centring and shuttering items)				
		For Foundation [Rate=20% of 119.25 =23.85]	Sq.M	35.00	33.38	1168.30
		For Circular Slabs [Rate=20% of 187.35 =37.47]	Sq.M	50.00	62.24	3112.00
		For Curved Beams [Rate=20% of 162.65 =23.85]	Sq.M	20.00	52.45	1049.00
		Circular Sides [Rate=20% of 61.10 =12.22]	Sq.M	60.00	62.24	3734.40
		Circular Columns [Rate=20% of 238.40 =12.22]	Sq.M	50.00	73.06	3653.00
viii	5.9.15	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	Sq.M	244.61	166.90	40825.83
ix	5.9.16	Edges of slabs and breaks in floors and walls,				
x	5.9.16.1	Under 20 cm wide	R.M.	5268.48	99.45	523950.34
xi	5.9.17	Cornices and mouldings	Sq.M	198.30	495.50	98257.65
xii	5.9.19	Weather shade, Chajjas, corbels etc. including edges	Sq.M	620.22	411.10	254972.44
xiii	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.	sqm	100.00	470.10	47010.00
20	5.11	Extra for additional height in centring, shuttering where ever required with adequate bracing, proppijng etc. including cost of de shuttering and decentering at all levels, over a height of 3.5 m for every additional height of 1 metre or part thereof (Plan area to be measured)				
	5.11.1	Suspended floors, roofs, landding, beams and balconies (plan area to be measured.)	Sq.M	841.31	121.65	102345.36
21	5.22	Seeel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level..				
	5.22.6	Thermo Mechanically Treated bars	Kg	887456.40	62.25	55244160.90
22	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Above Plinth Level.				
	5.22.6	Thermo Mechanically Treated bars.	Kg	669759.45	62.25	41692525.76
23	5.29	Providing and fixing sheet covering over expansion joints with iron screws as per design to match the colour /shade of wall treatment.				
	5.29.2	Aluminium fluted strips 3.15mm thick				
	5.29.2.1	150 mm wide	R.M.	936.00	312.35	292359.60
24	5.30	Add or deduct for plaster drip course/ groove in plastered surface or mouldig to R.C.C. projections.	R.M.	750.20	22.25	16691.95
25	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, 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				
	5.33.1	All works uptp plinth level.	CUM	579.02	5242.15	3035309.69
	5.33.2	All works above plinth level upto floor V level.	CUM	505.91	5781.50	2924918.67
26	5.34	Extra for providing richer mixes at all floor levels.Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.				
	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg / Cum	CUM	180.00	63.20	11376.00
27	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Qtl	350.00	589.80	206430.00

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
28	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of 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 the Engineer-in-charge.				
	5.37.1	All works upto plinth level.	CUM	579.02	5590.60	3237069.21
	5.37.2	All works above plinth level upto floor V level.	CUM	505.91	6130.00	3101228.30
29	5.40	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of 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 the Engineer-in-charge.				
	5.40.1	All works upto Plinth level	Cu.M	4632.12	5519.40	25566523.13
	5.40.2	All works above plinth & upto Floor V Level	Cu.M	4047.30	6059.20	24523400.16
					TOTAL	173847744.17
					TOTAL [III]	173847744.17
IV 6.0 BRICK WORK						
30	6.1	Brick work with common burnt clay F.P.S. (non modular) brick of class designation 7.5 in foundation and plinth in :				
	6.1.2	Cement mortar 1:6 (1Cement :6 Coarse sand)	Cum	859.17	3316.55	2849480.26
31	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	923.83	3876.15	3580903.65
32	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sq.M	5688.29	476.85	2712461.09
33	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	Sq.M	8126.13	63.30	514384.03
					TOTAL	9657229.03
					TOTAL [IV]	9657229.03
V STONE WORK						
34	7.38	Stone tile work for wall lining upto 10 m height with special adhesive over 12mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) including pointing in white cement with an admixture of pigment to match the stone shade.				
	7.38.1.1.	Granite stone of any colour and shade.	Sq.M	480.00	1234.20	592416.00
35	7.39	Extra for stone work for wall lining on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part there of.				
	a)	Height exceeding 10m but not exceeding 13m	Sq.M	160.52	65.85	10570.24
	b)	Height exceeding 13m but not exceeding 16m	Sq.M	142.52	131.70	18769.88
	c)	Height exceeding 16m but not exceeding 19m	Sq.M	28.50	263.40	7506.90
36	7.40	Providing and fixing dry cladding upto 10 metre heights with 30mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and/or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately)				
	7.40.1	Red sand stone	Sq.M	4055.70	1989.40	8068409.58
37	7.42	Providing and fixing adjustable stainless steel cramps of approved quality and of required shape and size adjustable with stainless steel nuts bolts and washer (total weight not less than 260 gms) for dry stone cladding fixed on frame work at suitable location including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	Each	16223.00	171.20	2777377.60
					TOTAL	11475050.21
					TOTAL [V]	11475050.21
VI 8.0 MARBLE WORK						

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
38	8.2	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished machine cut for kitchen platforms, vanity counters, windows sills, facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels.				
	8.2.2	Granite of any colour and shade				
	8.2.2.2	Area of slab over 0.50 sqm	Sq.M	2269.82	3083.40	6998758.21
39	8.4	Extra for fixing marble / granite stone over and above corresponding basic item, in facia and drops of width up 150 mm with epoxy resin based adhesive including cleaning etc. complete	R.M	80.00	185.80	14864.00
40	8.5	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / Granite / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	Each	80.00	281.10	22488.00
					TOTAL	7036110.21
					TOTAL [VI]	7036110.21
VII WOOD WORK 9.0						
41	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.				
	9.48.1	Fixed to steel windows by welding.	Kg	2453.63	90.75	222666.47
42	9.119	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size complete as per manufacturers specification and direction of Engineer-in-Charge.	R.M.	359.76	404.60	145558.90
41	9.120	Providing and fixing factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm . 19mm for styles and 15x15mm for top & bottom rails, M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45 degree angle on either side forming styles: and 5 mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded / sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined with 15mm x 15mm M.S. bolts and 15mm thick PVC glue.				
	9.120.2	30 mm thick pre laminated PVC door shutters.	Sq.M	94.43	2958.00	279325.12
					TOTAL	647550.49
					TOTAL [VII]	647550.49
VIII STEEL WORK 10.0						
43	10.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junction and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.				
	10.5.1	Using M.S. angles 40x40x6 mm for diagonal braces	Sq.M	10.50	2551.45	26790.23
44	10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangement for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5 cm long wire springs grade No. 2 and M.S. top cover of required thickness for rolling shutters.				
	10.6.1	80 x 1.25 mm M.S. laths with 1.25 mm thick top cover	Sq.M	6.12	1840.85	11266.00
	10.7	Providing and fixing ball bearing for rolling shutters	Each	3.00	429.85	1289.55
45	10.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia. M.S. box instead of laths as per design approved by engineer in charge.(area of grill to be measured.)	Sq.M	1.44	261.35	376.34
46	10.14	Providing and fixing pressed steel door frames conforming to IS:4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5 mm thick with mortar guards, lock strike- plate and shock absorbers as specified and applying a coat of approved steel primer after pre treatment of the surface as directed by Engineer-in-charges:				
	10.14.1	Profile B				

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
	10.14.1.1	Fixing with adjustable lugs with split end tail to each jamb	R.M.	2312.08	346.75	801713.74
47	10.16	Steel work in built up tubular trusses including cutting , hoisting ,fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.				
	10.16.3	Electric Resistance or induction butt welded tubes.	Kg	48990.40	105.85	5185633.58
47(a)	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	kg	200.00	558.00	111600.00
				TOTAL		6138669.44
				TOTAL [VIII]		6138669.44
IX FLOORING						
48	11.3	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.				
	11.3.1	40mm thick with 20mm nominal size stone aggregate.	Sq.M	12.56	280.05	3517.43
49	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1cement : 3 coarse sand), finished with a floating coat of neat cement				
	11.6.1	18 mm thick	Sq.M	746.70	258.20	192797.94
50	11.20	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand)				
	11.20.2	Medium shade with 50% white cement and 50% ordinary cement.	Sq.M	403.35	789.55	318467.99
51	11.23	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement:4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with:				
(i)	11.23.2	Raj nagar plain	Sq.M	658.52	1265.35	833261.71
(ii)	11.23.5	Udaipur green marble	Sq.M	567.77	1418.95	805634.40
52	11.24	Extra for pre finished nosing to treads of steps of marble stone.	R.M.	576.00	197.75	113904.00
53	11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 metre	Sq.M	403.54	230.55	93035.22
54	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of 1:4 (1 cement :4 coarse sand):				
	11.26.1	25 mm thick	Sq.M	10377.92	945.70	9814395.21
55	11.27	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	Sq.M	421.95	954.10	402583.35
56	11.31	Extra for pre finished nosing in treads of steps of kota stone / sand stone slab.	R.M.	277.08	52.45	14532.85
57	11.36	Providing and fixing quality ceramic glazed wall tiles conforming to IS:15622(thickness to specified by the manufacture)of approved make in all colours , shades excepted burgundy, bottle green,black of any size as approved by Engineer -in-charge in skirting ,risers of steps and dado over 12 mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) and jointing with gry cement slurry @ 3.3.kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	Sq.M	4488.60	724.25	3250868.55
58	11.37	Providing and laying ceramic glazed floor tiles 300x300mm (thickness to be specified by the manufacture) of Ist quality conforming to IS:15622 of approved make in colour such as white ,Ivory ,Grey,Fume Red Brown,laid on 20mm thick cement Mortar 1:4 (1cement:4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete.	Sq.M	325.00	764.55	248478.75
59	11.41	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.				
(i)	11.41.2	Size of Tile 60x60cm	Sq.M	5721.09	1337.10	7649669.44
(ii)	11.41.4	Size of Tile 100x100cm	Sq.M	2382.22	2246.10	5350696.62
				TOTAL		29091843.46
				TOTAL [IX]		29091843.46
X ROOFING 12.0						

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
60	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design:				
	12.21.1	In 75x75mm deep chase	Sq.M	991.48	109.05	108120.35
61	12.22	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.	Nos	42.00	148.75	6247.50
62	12.55	Providing and fixing Heat Resistant Terrace Tiles (300mm x 300mm x 20mm) with SRI (Solar refractive index) > 78, solar reflection >0.70 and initial emittance >0.75 on waterproof and sloped surface of terrace, laid on 20mm thick cement sand mortar in the ratio of 1:4 (1 cement :4 coarse sand) and grouting the joints with mix of White cement & marble powder in ration of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150mm height along the parapet walls in the same manner.	Sq.M	4998.79	1033.70	5167249.22
					TOTAL	5281617.07
				TOTAL [X]		5281617.07
XI FINISHING 13.0						
63	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix:				
i	13.2.1	1:4 (1 cement: 4 fine sand)	Sq.M	1161.95	143.55	166797.92
ii	13.2.2	1:6 (1 cement: 6 fine sand)	Sq.M	23050.78	130.20	3001211.36
64	13.4	12 mm cement plaster of mix:				
	13.4.1	1:4 (1 cement: 4 fine sand)	Sq.M	5956.97	132.10	786915.74
65	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	Sq.M	204.84	173.10	35457.80
66	13.16	6 mm cement plaster of mix:				
	13.16.1	1:3 (1 cement: 3 fine sand)	Sq.M	14952.01	101.00	1510153.01
67	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.				
	(a)	Ht Exceeding 10.0m but not exceeding 13.0m	Sq.M	1058.72	28.85	30544.07
	(b)	Ht Exceeding 13.0m but not exceeding 16.0m	Sq.M	1058.72	57.70	61088.14
	(c)	Ht Exceeding 16.0m but not exceeding 19.0m	Sq.M	211.74	115.40	24434.80
68	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	28167.54	83.80	2360439.85
69	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	Sq.M	5794.34	11.75	68083.50
70	13.42	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1	Two or more coats on new work	Sq.M	19717.27	37.35	736440.03
71	13.46	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				
	13.46.1	New work (Two or more coats applied @ 1.67 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	Sq.M	1631.87	67.50	110151.23
72	13.50	Applying priming coat :				
	13.50.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood.	Sq.M	1380.80	24.70	34105.76
	13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works.	Sq.M	556.16	20.70	11512.51
73	13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :				
	13.69.1	New work	Sq.M	1380.80	60.50	83538.40
74	13.79	Extra for addition of synthetic polyester triangular fibre of length 6mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125gms of synthetic polyester triangular fibre for 50kgs. Cement used in cement mortar as per directions of Engineer-in-Charge.	Per Bag of 50 Kg	1500.00	53.00	79500.00
75	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sq.M	28167.54	76.05	2142141.42
76	13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	13.83.2	Two Coats	Sq.M	7041.89	61.45	432724.14

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
77	13.84	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grames/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	13.84.2	Two Coats	Sq.M	828.43	53.90	44652.38
					TOTAL	11719892.06
				TOTAL [XI]		11719892.06
XII ROAD WORK 16.0						
78	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 with lead upto 50 metres.	Sq.M	241.00	61.25	14761.25
79	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 coarse sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge	Sq.M	96.40	536.65	51733.06
80	11.45	Providing and laying 500 x500 x40mm thick Turf paver (Turfpave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and based course and filling with 150mm thick jamuna sand, including spreading ,well ramming ,consolidating and finishing smooth etc. all complete as per direction of Engineer-in-Charge	Sq.M	144.60	1651.20	238763.52
					TOTAL	305257.83
				TOTAL [XII]		305257.83
XIII DRAINAGE 19.0						
81	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.	Nos	28.00	256.75	7189.00
	19.18	Supplying and fixing C.I. cover without frame for manholes:				
82	19.18.3	560 mm diameters C.I.cover (heavy duty) the weight of cover to be not less than 108 kg.	Nos	2.00	5289.10	10578.20
83	19.4.1.1	Providing and fixing S.W gully trap with F.P.S Brick class designation 75	Each	18.00	1256.35	22614.30
					TOTAL	40381.50
				TOTAL [XIII]		40381.50
IX ALUMINIUM WORK 21.0						
84	21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing 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				
	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	Nos	32.00	1953.10	62499.20
85	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	Sq.M	12.00	4444.75	53337.00
					TOTAL	115836.20
				TOTAL [IX]		115836.20
X WATER PROOFING 22.0						

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
86	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/sq. of cement admixed with water prroofing compound conforming to IS. 2645 and aproved 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 115 mm 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 approve 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 wwater proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth aproved 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 to 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-Chage:				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sq.M	4998.79	786.70	3932544.91
				TOTAL [X]		3932544.91
XI NON SCHEDULE ITEMS						
1	N.S-1	Diluting and injecting chemical emulsion for PRE-CONSTRUCTIONAL Anti-termite treatment and creating continous chemical barrier, wall trenches, top surface of plinth filling, along the external perimeter of building, over the top surface of consolidated earth of which apron is to be laid, surroundings of pipes and conduits etc. complete as per specification. (Plinth area of the building at ground floor only shall be measured for payment). Chlorpyriphos Emulsifiable concentrate of 20% with 1% Concentration.	Sq.M	4843.56	310.39	1503392.59
2	N.S-2	Providing and Fixing ISI marked 35mm thick flush Prelaminated door shutter, (with 1mm thick lamination on both sides) core of block board construction with frame of 1st class hardwood and well matched Commercial 3 ply veneering and as approved by Engineer	Sq.M	690.40	2816.00	1944166.40
3	N.S-3	Brick work flyash cement brick class desination 75 above plinth level cement mortar				
		Cement mortar 1:6 (1 cement: 6 coarse sand)	Cu.M	395.93	3589.32	1421119.47
4	N.S-4	Half brick work flash cement brick of class desination 75 cement mortar 1:4 (1 cement : coarse sand) including scofolding and curing etc, complete as per specification superstructure above plinth level upto floor level cemetrn mortar 1:4 (1cement :4 saand)	Sq.M	2437.84	378.41	922503.03
		Cement mortar 1:4 (1 cement : 4 coarse sand)				
5	N.S-5	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc with 24 mm thick unit consist of outer glass SGG 6mm thick EVO Star ET 425 Aura Green, having 12mm air gap, and inner glass 6 mm thick clear float toughened of Saint-Gobain make with following performance. VLT-21%, Solar Factor-0.18, U value -2 .0 W/sqm K. Including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.The contractor must provide details of structural calculations of the Mullion / Transom member offered, and also provide drawings of individual profiles - Mullion, Transom, Pressure Plate, cover plate and also details of any other profiles that may be used - clearly indicating all dimensions, wall thickness and weight - kg./m. The anchoring / bracing of the curtain wall glazings to the RCC slab /beams / columns shall be done with non-corrossive galvanised brackets of approved design, (Galvanising to be done conforming to IS:4759-1996 upto 610 gms. per sqm. (80-90 micron thickness) with two numbers on each beam, including providing PVC spacers between the aluminium Mullion Member and Bracket (including providing and fixing of aluminium shims of various thickness to adjust the beam level/line variations) with dash fasteners and stainless steel bolt to provide a minimum anchoring depth of 50 - 80 mm. in the concrete and to withstand the dead load of the curtain wall as well as stresses due to wind pressure etc.The glazing framework shall be aligned for the entire height of each Mullion and for the entire width of each Transom by lazer beam equipment to ensure 100 per cent 'X' axis and 'Y' axis alignment.	Sq.M	1267.97	7134.00	9045697.98
6	N.S-6	Designing, Providing, Fabrication at site and installing aluminium door/ Aluminium Window/ Aluminium sliding window/Aluminium Partitions (Jindal 8830 series or equivalent) AC 15 Anodised with 101x45x2mm Aluminium frame work all around. The window should have on Mesh shutter inside along with two glass shutter, the botom track section to have milled ends to be sealed with silicone/ isobuty/ putty with 6.0mm thick non toughened ST 707 advance solar control glass complete.	Sq.M	140.89	5312.00	748407.68
7	N.S-7	Providing and fixing aluminium works for partitions with extruded built up standard tubular sections ,12 mm thick prelaminated partial board with decorative lamination on both sides with float glass panes of 6 mm thickness	Sq.M	568.08	2769.00	1573013.52

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
8	N.S-8	Providing & Fixing Float Glass 4mm thick (10Kg/Sqm) with steel beading of approved shape & section with screws in pressed steel door, window & CSW's Frames/Shutter & M.S. Tubular section shutters of doors & windows.	Sq.M	155.40	610.00	94794.00
9	N.S-9	Supplying and Fixing Drapery rods 30mm dia of M.S Pipe of thickness 1.6mm with powder coating (wooden finish) including metal brackets, rings and ends all as specified. Fixed to brick walls/RCC lintels with dash fastners.	R.M	1475.00	150.00	221250.00
10	N.S-10	Providing and laying in position cement concrete 1:5:10 (1 cement: 5 course sand: 10 Brick aggregate 40mm nominal Size) in foundations/ sunken floors of toilets excluding the cost of centering and shuttering.	Sq.M	273.83	3396.00	929926.68
11	N.S-11	Supply and fixing of non OZONE make stainless steel railing with specifications SS-304 grade railing made of 38mm baluster and 38mm top rail of 1.6mm thickness with 3 mid rails of 12 OD tube connected with CNC machine made. Modular connectors fixed with dash fastners. Centre distance between each baluster shall be 1000mm. (Market Rate Item).	Sq.M	291.89	4820.00	1406909.80
12	N.S-12	Providing and fixing Ecophon SUPER G A with 40 mm natural square edge ,demountable panels with the option of weekly wet cleaning (Akutex T and Super G surfaces) and vacuum cleaning (Colorado surface) , manufactured from High density glass wool ,with the visible surface has an Akutex T coating , a glass fibre fabric (TEXONA)or a strong glass fibre (Super G) and the back of the tile should be covered with glass tissue . The glass wool core of the tiles should be tested and classified as non combustible according to prEN ISO 1182 .The system should have Sound Absorption NRC value of 0.9 (according to EN ISO 11654). Tiles should withstand a permanent ambient RH upto 95% at 30 * C without sagging , warping or delaminating (ISO 4611) . The light reflectance of the tiles should not be less than84 % (for Akutex T surface)	Sq.M	1018.49	6073.40	6185697.17
13	NS.13	Providing & Fixing stainless steel pipe of 75mm dia of 1.6mm thickness of SS304 grade on Terrace shown on drawings	Rm	252.00	1827.00	460404.00
14	N.S-14	ACOUSTICAL FALSE CEILING Providing and fixing of Armstrong Mineral Fibre Acoustical Suspended Ceiling System with Fire fissured (Micro Look) edge tiles with Armstrong superfine 15mm exposed grid in module size 600x600x16mm with Bio Block Casting on the face of the tile. The grid shall be 15mm wide T-Section flanges colour white, main runner 1200mm & 600mm Cross Tees.	Sq.M	1212.16	2141.00	2595234.56
15	N.S-15	Armstrong False Ceiling The ceiling to be constructed of ARMSTRONG THERMATEX FEINSTRATOS VT- 15 Mineral Fiber Tiles Recess Tegular edge (VT-15 edge), Humidity Resistance Panel upto 95% RH, NRC 0.55,white colour similar to RAL 9010 of 600mm x 600mm tile of 15mm thickness laid into an exposed grid system of 15mm grid, hanging gridconsisting of main runner spaced at 1200mm centers securely fixed to the structures soffit by approved hangers at maximum 1200mm centers. There should be a minimum of 1 hanger per 1500mm of ceiling area and last hanger should not be further than 450mm from the adjacent wall. 1200mm cross tees to be fixed between main runner at 600mm centers to form 1200mm x 600mm module & 600mm cross tees fitted centrally between 1200mm cross tees to create 600 x 600mm module. The product should be certified in accordance with Quality Assurance Standard to ISO 9001 and ISO 14001. The mineral panels should have RAL Seal Of Approval.	Sq.M	7945.52	1604.00	12744614.08
16	N.S-16	Providing applying cementations Krystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc with krystol T1 system. The application to be done from +ve(postive) side on wet open pore concrete surface with brush @ 1Kg/Sq.M as per manufacturer specification.	Sq.M	724.93	441.00	319694.13
17	N.S-17	Supply & fixing of structural glazing at Façade of ground plus three buildings using glazing section on direct stick mullion & transom system of which mullion shall be of 80x50x1.8 mm with notch & transom to be of 50x50x1.8 mm with notch , Aluminum Glazing sections shall be powder coated with heat treatment on three surfaces in Ivory/Black colour using 6mm thick TOUGHENED SGG EVO Star ET 425 AURA GREEN HEAT REFLECTIVE GLASS VLT-24%, Solar Factor- 0.25 and U-value-3.72 W Sqm K of Saint-Gobain makeof approved colour of to be pasted with 12mm x 6 mm both side adhesive Spacer foam tape & structural silicon of Dow Corning 995 grade or it's equivalent. The Weather /water sealing of glass joints shall be done with 10 mm wide Dow Corning make weather sealant of grade 789 or its equivalent. The Mullion of Aluminum structure is to be fastened with R.C.C. Slab/beam with help of Powder coated/ Galvanized MS Brackets of 75 mm length with help of M10 x 100 mm Mechanical tempered Dash Fasteners. The job Includes all necessary hardware, cleat, Screws, nut washers etc. Complete job with all material and labour as per direction of Engineer-in-charge.	Sq.M	761.52	5662.00	4311726.24
18	N.S-18	Providing and applying Silicon Based Water repellent coating by brush or by spray.	Sq.M	3154.43	232.00	731827.76

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
19	N.S-19	WATER PROOFING TREATMENT WITH KRYSTOL T1+T2 SYSTEM Providing and applying of cementitious crystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc. with Krystol T1/T2 system. The application to be done from -ve (negative) side on a wet open pore concrete surface with brush @ 0.8kg of Krystol T1 & 0.8kg of Krystol T2 as per manufacturer specificatio. including makeing grooves of 10x15mm size on the construction joints and treating with Krystol T1 mixed with water in ratio 5:1 (5 parts of krystol T1: 1 part of clean water) as per manufacturers specification etc. and as per direction of Engineer-in-Charges. The rate also includes the cleaning of surface to be treated with air compressor wherever required.	Sq.M	204.84	737.00	150967.08
20	N.S-20	Wooden Flooring (DIAS) Providing and fixing wooden flooring of 25mm thick with pre-laminated flat pressed three layer Engineered Hard wood Flooring on Stage of Armstrong or equivalent make exterior grade including edge profiles as may be required in desired shape and size of approved colour and texture. including front cladding of stage riser 38mm thick parquet (wood block) flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1Cement :2Coarse Sand :4 Stone aggregate 10mmnominal size) to be paid separately coated with a thin layer of hot bitumen (blown type) @ 2.45 kg per sqm. including fixing blocks in position after dipping in hot bitument (blown type) upto half depth, planded, levelled smooth and finished complete.	Sq.M	12.56	4913.00	61707.28
21	N.S-21	Providing and Fixing Glass Mosaic Tiles (20x20)x4mm thick Random Pattern on walls with glass Mosaic Adhesive over 12mm thick screed in cement mortar 1:4 (1Cement 4 coarse sand) tile joints pointed in neat white cement slurry mixed with pigment to match with the shade / colour of the tiles ,Coral/,cheer.	Sq.M	677.58	1396.00	945901.68
22	N.S-22	Carpetting Supplying & fixing of 4.3mm thickness heavy commercial range flocked flooring with advantage of water proof, antifungal, allergy proof sanitized, total weight 1.8 kg/m2, fire resistant, stain resistant duly installed at floor.	Sq.M	410.04	3008.00	1233400.32
23	N.S-23	VETRIFIED DOUBLE CHARGED Providing & fixing Vitrified Tiles 605x605mm (R Series) Double Charged Matt Finish (Premium Quality) of approved colour & shade laid over 20mm thick Cement mortar 1:4 (1Cement :4 Coarse Sand) jointed and pointed in white cement mixed with colour to match the colour & shade of the tiles.	Sq.M	851.70	1670.00	1422339.00
24	N.S-24	PVC Flooring Providing and installing of Accolade plus impregnated PUR Vinyl Sheet Flooring 6 feet (1.83m) wide in Rolls having a nominal total thickness of [0.08 in (2mm)] of approved colour and shade laid over smooth, flat, hard and free from moisture, grease etc. using water based adhesive like VC 31 of pidilite or similar Accolade Plus shall confirm to group P of wear Resistance as per EN 660-2 Fure Resistance of more than 11KW/m2 as per ISO 9329-1	Sq.M	2827.80	2193.00	6201365.40
25	N.S-25	Acid Proof Tiles Providing and fixing Acid Proof Tiles 300x300mm Premium Quality of approved colour & shade laid over 20mm thick cement mortar 1:4 (1 cement :4 Coarse Sand) jointed & pointed in white cement mixed with pigment to match the shade of the tile.	Sq.M	764.03	1084.00	828208.52
26	N.S-26	Providing & Fixing of Danpalon 16mm thick (with minimum 1040mm wide) multicell Polycarbonate sheet with standing seam on both sides & double tooth snap on locking system to ensure maximum uplift capability. The panels will be UV protected and antiglare/softlight. The cross section of one cell shoul not be more than 4mmx4mm & weight of single panel shall not be less than 3250 per square metre. The system will be fitted on purlins with spacing as specified by manufacturer.	Sq.M	1494.57	5321.68	7953623.28
27	N.S-27	CHAIRS WITH WRITING BOARD 560mm to 600mm CTC, Rocking seat with auto tip up cushion, seat depth 650mm wooden armrest with fabric upholstred and with foldable writing tablet. Chair with Cover on the back side. Single Central foot for easy house keeping Make:-Featherlite/ Godrej/ B.P Erqo . approved by Architects & Client.	Nos	1140.00	5878.00	6700920.00
28	NS.28	SCREENS Supplying, installing, Testing and commissioning of 100" motorized Matt white projection screen wall with all accessories.	Nos	14.00	62715.00	878010.00
29	N.S-29	AUDITORIUM CHAIRS 535mm to 600mm CTC, Rocking seat with auto tip up cushion, seat depth 650mm. PPCP armrest with cup holder and fabric padding on top for comfort. Chair with cover on the back side. Sigle Central foot for easy house keeping. Make : Featherlight/ Godrej/ B.P Ergo . approved by Architect & Client.	Nos	255.00	9500.00	2422500.00
30	N.S.30	Final coat of ultra permasand with chips (to offer grooved finish) over a coat of ultra permasand without chips (as base coat) over a repair check with exterior grade putty over a coat of acrylic primer. (as per approved shade).	Sq.M	1503.57	425.00	639017.25

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	TOTAL QTY	RATE (in Rs)	AMOUNT (in Rs)
31	N.S.31	Providing Filling the Expansion joint with joint sealing compound on polyeurathane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete.				
		50mm thick Horizontal Expansion Joint	R.M	360.00	1583.00	569880.00
32	N.S.32	Providing Filling the Expansion joint with joint sealing compound on polyeurathane based or equivalent (Dr. Fixit Pidiseal/Hydrocreate/sika/CRYTON) including a backup material like Thermocole / Celatex board inside the groove of expansion joints. The width to depth ratio of sealant should be 2:1 mixing the base and curing paste thoroughly using a slow speed drill machine with a suitable paddle until homogeneous and filling the joints with a suitable means starting from one end taking care at no point air is entrapped. After the completion of the filling, using suitable tool ensuring the seal is finished with proper adhesion on the two side surfaces and etc. complete.				
		50mm thick Vertical Expansion Joint	R.M	576.00	1583.00	911808.00
33	N.S-33	STAINLESS STEEL FITTINGS				
	(a)	Providing and fixing S.S.Sliding door bolt size 16mmx300mm finish SS Matt fixed with necessary screws etc. complete.(Make:-Ebco/Ozone/Dorma)	Nos	131.00	538.00	70478.00
	(b)	Providing and fixing S.S.Sliding door bolt size 16mmx250mm finish SS Matt fixed with necessary screws etc. complete.(Make:-Ebco/Ozone/Dorma)	Nos	263.00	457.00	120191.00
	(c)	Providing & fixing S.S. tower bolt Size 250x12mm finish SS matt with necessary screws etc., complete.(Make:-Ebco/Ozone/Dorma)	Nos	820.00	269.00	220580.00
	(d)	Providing & fixing S.S. tower bolt Size 100x10mm finish SS matt with necessary screws etc., complete. (Make:-Ebco/Ozone/Dorma)	Nos	1932.00	135.00	260820.00
	(e)	Providing & fixing S.S. handle size 25x150mm with necessary screws etc., complete.(Make:-Ebco/Ozone/Dorma)	Nos	1050.00	900.00	945000.00
	(f)	Providing & fixing S.S. handle size 15x100mm with necessary screws etc., complete. (Make:-Ebco/Ozone/Dorma)	Nos	966.00	646.00	624036.00
	(g)	Providing & fixing S.S.Door Stopper size 65x2.5MM finish SS Matt with necessary Screws etc., complete.(Make:-Ebco/Ozone/Dorma)	Nos	523.00	300.00	156900.00
	(i)	Providing & fixing alu. Diecast body tubluor type universal hydraulic door closer with necessary crews etc. complete.(Make:-Ebco/Ozone/Dorma)	Nos	523.00	991.00	518293.00
34	NS-34	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	450.00	300.00	135000.00
				TOTAL [XV]		81131324.89

PLUMBING WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	SANITARY INSTALLATIONS & C.P FITTINGS	504460.20	219981.65
ii	CI PIPES & FITTINGS	481800.60	22195.93
iii	RAIN WATER PIPES & FITTINGS	1015166.00	14650.00
iv	WATER SUPPLY WORKS	279356.95	5220953.79
v	EXTERNAL SEWRAGE	309172.70	-
vi	EXTERNAL DRAINAGE	783139.90	
	G.TOTAL	3373096.35	5477781.36

BILL OF QUANTITIES

SECTION-A : INTERNAL PLUMBING WORKS

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
[i] SANITARY INSTALLATIONS & C.P FITTINGS						
		DSR 2012 TEMS				
1		Providing and fixing wash basins with C.P. brass pillar tap, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls and floors where required.				
	17.7.1	White Vitreous china Wash basin of size 630 x 450mm with a pair of 15mm C.P brass pillar taps.	Each	52.00	1848.35	96114.20
2	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at back for the reception of pipes and fittings	Each	52.00	894.70	46524.40
3	17.22	Providing and fixing G.I. intel connection for flush pipe connecting with W.C. pan.	Each	24.00	94.00	2256.00
4	17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm 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 :				
	17.4.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	Each	8.00	8445.00	67560.00
	17.4.3	Range of three Uninal basin with 10 ltr. White PVC automatic flushing cistern.	Each	8.00	11046.80	88374.40
5	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. / PVC 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	Each	8.00	5152.40	41219.20
	17.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern	Each	8.00	6826.65	54613.20
6	17.7	Providing & fixing PTMT Bottle Trap for wash basin & 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 266gms.	Each	40.00	435.30	17412.00
7		Providing and fixing P.V.C. waste pipe for wash including P.V.C. waste fittings complete				
	17.28.1	Semi rigid pipe				
	17.28.1.1	32mm dia	Each	52.00	59.50	3094.00
8	17.31	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.	Each	52.00	674.05	35050.60
9		Providing and fixing toilet paper holder:				
	17.34.1	CP brass	Each	24.00	250.95	6022.80
10		Providing and fixing C.P brass angle valve for basin mixer and geyser points of approved quality confirming to IS:8931				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	18.53.1	15 mm nominal bore	Each	84.00	449.35	37745.40
11	18.21	Providing and fixing unplasticised PVC connection pipe with brass unions				
	18.21.2	45 cm length				
	18.21.2.1	15 mm nominal bore	Each	84.00	61.70	5182.80
12	18.5	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.				
	18.51.1	a) 15 mm nominal bore	Each	8.00	411.40	3291.20
		Total C/f to Summary		Total DSR ITEMS [i]		504460.20
		NON SCHEDULE ITEMS				
1	NS	Providing and Fixing C.P. brass Ablution health faucet assembly with 1.2 m long braided PVC hose with mounting bracket fixed on wall complete including diverter and two way angle valve[FOR EWC]	Each	24.00	503.10	12074.33
2	NS	Providing & fixing 4 mm thick SS hinged grating with rim of approved design including setting in floor with cement mortar.				
i		125 mm dia	Each	53.00	239.57	12697.22
3	NS	Providing & Fixing CP brass liquid soap container fixed to the wall with PVC rubber plug with C.P brass screw complete Each	Each	52.00	907.89	47210.10
4	NS	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid 10 litre low level white vitreous china dual flushing cistern & C.P. flush bend with fittings & CI Brackets, 40 mm 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.	Each	24.00	5000.00	120000.00
5	NS	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast iron P or S trap, white vitreous china dual flushing cistern, including flush pipe, 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 580x440 mm with integral type foot rest.	Each	8.00	3500.00	28000.00
		Total C/f to Summary		Total NS ITEMS [i]		219981.65
[ii]		CI PIPES & FITTINGS				
		DSR 2012 ITEMS				
1	17.35	Providing and fixing soil, waste and vent pipes :				
	17.35.1	100 mm dia.				
	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	RM	400.00	857.30	342920.00
2	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:				
	17.58.1	100 mm	Each	200.00	207.85	41570.00
3	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 10x10x10cm 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.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	17.37.1	For 100 mm dia. pipe	Each	150.00	112.50	16875.00
4	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	Each	8.00	353.25	2826.00
5	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	Each	8.00	296.35	2370.80
6	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	Each	8.00	342.80	2742.40
7	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	100x100x100mm				
	17.43.1.2	Sand cast iron S&S as per IS-3989	Each	8.00	579.75	4638.00
8	17.44	Providing and fixing single equal plain junction of required degree.				
	17.44.1	100x100x100mm				
	19.44.1.2	Sand cast iron S&S as per IS-3989	Each	8.00	442.00	3536.00
9	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	Each	8.00	244.10	1952.80
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 :				
	17.60.1	100 mm inlet and 100 mm outlet				
	17.60.1.1	Sand cast iron S&S as per IS-3989	Each	8.00	801.70	6413.60
11	18.10 & 18.11	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. (internal work) Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall (for Waste Conn.from WB/Urinals/Sinks)				
i	(18.10.4+18.40.4+18.78)	32 mm dia nominal bore	RM	70.00	367.90	25753.00
ii	(18.10.5+18.40.5+18.78)	40 mm dia nominal bore	RM	45.00	436.60	19647.00
iii	(18.10.6+18.40.6+18.78)	50 mm dia nominal bore	RM	20.00	527.80	10556.00
		Total C/f to Summary		Total DSR ITEMS [ii]		481800.60
		NON SCHEDULE ITEMS				
1	NS	Providing and fixing G.I Inlet fitting with maximum 3 inlets 32, 40 or 50 mm size fabricated from 100 mm dia G.I pipes(approx. length=150mm to 300mm) and welded G.I sockets, fixed to CI trap with lead caulked joint and set in cement concrete as per standard drawing including cost of Bitumastic paint complete.	Each	36.00	503.12	18112.33

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
2	NS	Providing & fixing 100X50 mm. dia. G.I elbow (drain point) in the toilet floor including 100 mm dia. C.P. waste jali complete as required.	Each	17.00	240.21	4083.60
		Total C/f to Summary		Total NS Items [ii]		22195.93
[iii]		FOR RAIN WATER:				
1	17.35	Providing and fixing soil, waste and vent pipes:				
	17.35.1	100mm dia				
	17.35.1.1	Sand cast iron S&S as per IS-1729	RM	1000.00	734.30	734300.00
2	17.58	Providing lead Caulked joints to sand cast iron/centrifugally cast (spun) iron pipes & fittings of diameters.				
	17.58.1	100 mm	Each	700.00	207.85	145495.00
3	17.37	Providing & fixing M. S. holder - bat clamps of approved design to sand Cast iron/cast iron (spun) pipe embedded in & including cement concrete blocks 10*10*10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). Including cost of cutting holes&making good the walls etc.				
	17.37.1	For 100 mm dia pipe	Each	800.00	112.50	90000.00
4	17.57	Providing & fixing collar				
	17.57.1	100 mm dia				
	17.57.1.1	Sand Cast iron S&S as per IS:1729	Each	200.00	177.85	35570.00
5	12.22	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 end making and finishing the outlet complete.	Each	54.00	148.75	8032.50
6	12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	Each	54.00	32.75	1768.50
		Total C/f to Summary				1015166.00
		(NON-DSR)				
1	NS	Providing and fixing cast brass clean out plug with suitable insert keys for opening in brass cap, male threaded joint/reducer with G.I. socket caulked to Pipe/fittings of CI pipe /Floor trap including cost of lead joints etc. complete in all respect.				
	i	100 mm dia.	Each	25.00	586.00	14650.00
		Total C/f to Summary		Total DSR Items [iii]		14650.00
[iv]		WATER SUPPLY WORKS				
		DSR 2012 ITEMS				
		COLD WATER SUPPLY:				
		C.P.V.C PIPES				
1	18.8	Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stabilty for hot & cold wter supply, includign 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 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,				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i	18.8.1	15 mm nominal outer dia pipes	RM	40.00	218.65	8746.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	95.00	243.05	23089.75
iii	18.8.3	25 mm nominal outer dia pipes	RM	35.00	297.95	10428.25
iv	18.8.4	32 mm nominal outer dia pipes	RM	18.00	358.90	6460.20
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyviny 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.				
i	18.7.2	20mm dia. nominal bore	RM	10.00	157.15	1571.50
ii	18.7.3	25mm dia. nominal bore	RM	20.00	197.90	3958.00
iii	18.7.4	32mm dia. nominal bore	RM	10.00	252.65	2526.50
iv	18.7.5	40mm dia. nominal bore	RM	10.00	348.25	3482.50
v	18.7.6	50mm dia. nominal bore	RM	15.00	514.35	7715.25
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.	Each	4.00	450.90	1803.60
ii	18.17.3	40 mm nominal bore	Each	4.00	546.05	2184.20
iii	18.17.4	50 mm nominal bore	Each	1.00	780.60	780.60
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.2	20 mm nominal bore.	Each	2.00	360.20	720.40
ii	18.18.3	25 mm nominal bore	Each	2.00	421.65	843.30
		External work				
5	18.9	Providing & fixing Chlorinated polyviny Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, This includes jointing of pipes & fittings with one step CPVC solvent cement , trenching , refilling and testing of joints complete as per direction of Engineer in charge.				
i	18.9.7	62.5 mm dia. nominal inner dia pipes	RM	100.00	1326.35	132635.00
6	18.12	Providing and fixing G.I. pipe complete with G.I fittings including trenching and refilling etc.				
	18.12.7	65 mm dia nominal bore	RM	32.00	453.55	14513.60
	18.12.8	80 mm dia nominal bore	RM	20.00	573.40	11468.00
7	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 100*100*75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm 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) 12 mm thick finished with a floating coat of neat cement complete as per standard design:				
i	18.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	1.00	908.95	908.95

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
8	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 in the pipe etc. complete:				
i	18.13.1	25 to 40 mm nominal bore	Each	4.00	277.35	1109.40
ii	18.13.2	50 to 80 mm nominal bore	Each	4.00	630.15	2520.60
		Total C/f to Summary		Total DSR Items [iv]		237465.60
		NON SCHEDULE ITEMS				
		Internal work - Exposed on wall				
9		Providing & 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.				
i		65mm dia. nominal bore	RM	25.00	850.00	21250.00
ii		80mm dia. nominal bore	RM	10.00	1000.00	10000.00
10		Providing and fixing PN 16 Butterfly valve of the following dia				
i		65 mm dia. nominal bore	RM	3.00	2500.00	7500.00
i		80 mm dia. nominal bore	RM	1.00	3000.00	3000.00
11	NS	Providing and fixing Puddle flanges fabricated out of 600mm long GI/MS pipe welded with 6mm thick M S plates along with flanges of suitable size and properly fixed in walls and top slabs of OHT / UGT complete.				
	i	50mm dia	Each	20.00	325.33	6506.52
	ii	80mm dia	Each	16.00	699.83	11197.27
12	NS	Providing & fixing of hand lever operated forged brass body full way ball valve type isolating valve having forged brass hard chrome plated mirror finish ball, steel handle with PVC grip, teflon seat, screwed ends tested to a pressure of 15 kg/sqcm complete.				
i		65 mm nominal bore	Each	1.00	1500.00	1500.00
13	NS	Providing and fixing 600 mm long MS Heavy Class puddle flanges fabricated out of 6 mm thick M.S. plates of suitable size properly fixed in walls & top slab of tanks of following diameters				
i		25 mm dia	Each	400.00	1500.00	600000.00
ii		32 mm dia	Each	400.00	2000.00	800000.00
iii		50 mm dia	Each	400.00	2500.00	1000000.00
iv		80 mm dia	Each	400.00	3000.00	1200000.00
v		100 mm dia	Each	400.00	3500.00	1400000.00
vi		150 mm dia	Each	40.00	4000.00	160000.00
		Total C/f to Summary		Total NS Items [iv]		5220953.79
		FLUSHING WATER SUPPLY:				
		C.P.V.C PIPES				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	18.8	Providing & fixing Chlorinated polyviny 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 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,				
i	18.8.1	15 mm nominal outer dia pipes	RM	40.00	218.65	8746.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	32.00	243.05	7777.60
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyviny 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.				
i	18.7.1	15mm dia. nominal bore	RM	10.00	133.95	1339.50
ii	18.7.2	20mm dia. nominal bore	RM	10.00	157.15	1571.50
iii	18.7.3	25mm dia. nominal bore	RM	10.00	197.90	1979.00
iv	18.7.4	32mm dia. nominal bore	RM	10.00	252.65	2526.50
v	18.7.5	40mm dia. nominal bore	RM	25.00	348.25	8706.25
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.	Each	1.00	450.90	450.90
	18.17.3	40 mm nominal bore.	Each	4.00	546.05	2184.20
	18.17.4	50 mm nominal bore.	Each	1.00	780.60	780.60
	18.17.5	65 mm nominal bore.	Each	1.00	1073.25	1073.25
	18.17.6	80 mm nominal bore.	Each	1.00	1832.95	1832.95
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.1	15 mm nominal bore.	Each	2.00	258.05	516.10
ii	18.18.2	20 mm nominal bore.	Each	2.00	360.20	720.40
iii	18.18.3	25 mm nominal bore	Each	4.00	421.65	1686.60
		Total C/f to Summary		Total DSR Items [iv]		41891.35
IV		EXTERNAL SEWERAGE				
1.0	2.10	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, with in a lead of 50 m:				
		All kinds of soil.				
i	2.10.1.2	Pipes, cable etc. exceeding 80 mm dia but not exceeding 300 mm dia.	RM	210.00	165.60	34776.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
2.0	19.1	Providing, laying and jointing glazed stone ware pipes grade `A' with stiff mixture of cement mortar in the proportion of 1:1 (1cement :1 fine sand) including testing of joints etc complete.				
	19.1.2	150 mm diameter	RM	50.00	219.05	10952.50
i	19.1.3	200 mm diameter	RM	50.00	323.05	16152.50
	19.1.4	250 mm diameter	RM	110.00	446.15	49076.50
3.0	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.				
i	19.3.2	150 mm diameter	RM	50.00	382.75	19137.50
	19.3.3	200 mm diameter	RM	50.00	449.90	22495.00
	19.3.4	250 mm diameter	RM	110.00	523.75	57612.50
4.0	19.4.2.1	Providing and fixing square mouth S. W. Gully trap grade `A' complete with C.I. grating brick masonry chamber with F.P.S bricks and water tight CI cover with frame of 300 x 300 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	Each	4.00	1278.30	5113.20
5.0	19.7	Constructing brick masonry manhole in cement mortar 1 : 4 (1 cement : 4 coarse sand) RCC top slab with 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 grade stone aggregate 20mm nominal size); foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1cement 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design				
	19.7.1	Inside size 90 x 80 cm & 45 cm deep including CI cover with frame (light duty) 455 x 610mm internal dimension total wt. of cover & frame to be not less than 38 kg (wt. of cover 23 kg and wt. of frame 15 kg)				
	19.7.1.1	With F.P.S. bricks with class designation 75	Each	11.00	7132.00	78452.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	60.00	256.75	15405.00
		Total Carried to DSR Items				309172.70
V		EXTERNAL DRAINAGE				
1.0	2.10	Excavating trenches in all kind of soil of required width for pipes. including excavation for sockets and dressing of sides, ramming of bottoms, including getting out the excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating Each deposited layer by ramming, watering, etc & disposing of surplus excavated soil as directed within a lead of 50m.				
		up to 1.50 m depth				
i	2.10.1.2	Pipes 80 mm to 300 mm diameter	RM	360.00	165.60	59616.00
2.0	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 RCC Pipes including bed concrete as per standard design.				
i	19.3.2	150 mm diameter	RM	240.00	382.75	91860.00
ii	19.3.4	250 mm diameter	RM	100.00	523.75	52375.00
3.0	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 (1cement :2 fine sand) including testing of joints etc complete.				
i	19.6.2	150 mm diameter R.C.C pipes	RM	240.00	254.50	61080.00
ii	19.6.3	250 mm diameter R.C.C pipes	RM	100.00	342.45	34245.00
iii	19.6.4	300 mm diameter R.C.C pipes	RM	88.00	422.90	37215.20
iv	19.6.6	500 mm diameter R.C.C pipes	RM	55.00	722.20	39721.00
v	19.6.7	600 mm diameter R.C.C pipes	RM	46.00	1084.25	49875.50

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
4.0	19.9.1.1	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), inside plastering 12 mm thick with cement mortar 1:3 (1cement 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 40 mm nominal size) <i>and making necessary channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design</i>				
		0.91 m deep with SFRC cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to IS : 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 20 mm 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) with F.P.S.bricks class designation 75	Each	18.00	7007.40	126133.20
5.0	19.10.1	Extra for depth for circular manhole 0.91m internal dia at bottom with beyond 0.91m to 1.67m.				
		With FPS Bricks class designated 75	RM	20.00	3498.25	69965.00
6.0	19.27.1	Constructing brick masonry road gully chamber 50 x 45 x 60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500 x 450mm precast RCC horizontal grating with frame complete as per standard design				
		With FPS bricks	Each	44.00	3193.50	140514.00
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm 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 manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	80.00	256.75	20540.00
		Total Carried to DSR Items				783139.90

ELECTRICAL WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	INTERNAL ELECTRICAL WORKS	12744192.50	34135817.00
	Total C/F To Summary	12744192.50	34135817.00

Signature of N.I.T.

Signature of Contractor

BILL OF QUANTITIES						
SECTION-B : INTERNAL ELECTRICAL WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		DSR ITEMS				
1.0		Point wiring in PVC conduit , with modular type switch :-				
		Wiring for light point/fan point /exhaust fan point/call bell point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.				
i	1.10.3	Group C	Point	2977.00	664.00	1976728.00
2.0	1.11	Wiring for twin control light point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with 2 Way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.	Point	20.00	710.00	14200.00
3.0		Sub main wiring in PVC conduit :-				
		Wiring for Submain/ Circuit wiring alongwith earth wire with the following sizes of PVC insulated, copper conductor single core cable in surface/ recessed PVC conduit as required.				
i	1.14.2	2 x 2.5 sq.mm. +1 x 2.5 sq.mm. Earth wire	RM	7500.00	131.00	982500.00
ii	1.14.3	2 x 4 sq.mm. +1 x 4 sq.mm. Earth wire	RM	14500.00	162.00	2349000.00
iii	1.14.4	2 x 6 sq.mm. +1 x 6 sq.mm. Earth wire	RM	1680.00	206.00	346080.00
iv	1.14.9	4 x 6 sq.mm. + 2 x 6 sq.mm. Earth wire	RM	1000.00	358.00	358000.00
v	1.14.10	4 x 10 sq.mm. + 2 x 10 sq.mm. Earth wire	RM	2000.00	562.00	1124000.00
vi	1.14.11	4 x 16 sq.mm. + 2 x 16 sq.mm. Earth wire	RM	1500.00	789.00	1183500.00
4.0		S/F Modular type electronic fan regulator :-				
	1.25	Supply and fixing of stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	720.00	322.00	231840.00
5.0		S/F Modular type blanking plate :-				
	1.26	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	10.00	22.00	220.00
6.0		S/F MODULAR BOXES, BASE & COVER PLATE :-				
		Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required				
i	1.27.1	1 or 2 Module (75 mm x 75 mm)	Each	770.00	142.00	109340.00
ii	1.27.2	4 Module (125 mm x 75 mm)	Each	150.00	154.00	23100.00
7.0		S/F MODULAR TYPE SWITCH / SOCKET :-				
		Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required				
i	1.24.1	5/6 amps switch	Nos	500.00	75.00	37500.00
ii	1.24.4	3 pin 5/6 amp. Socket outlet	Nos	500.00	96.00	48000.00
iii	1.24.6	Telephone Socket outlet	Each	150.00	89.00	13350.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
8.0		Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
i	1.21.1	20 mm.	RM	5000.00	56.50	282500.00
ii	1.21.2	25 mm.	RM	10000.00	64.50	645000.00
iii	1.21.3	32 mm	RM	1500.00	80.50	120750.00
iv	1.21.4	40 mm	RM	1500.00	106.00	159000.00
v	1.21.5	50 mm	RM	200.00	135.00	27000.00
9.0		Supply and drawing telephone wire of following pair, 0.5 sq.mm. FR PVC insulated copper conductor, unArmoured telephone cable in the existing surface / recessed conduit as required.				
	1.18.2	2 Pair	RM	3000.00	15.50	46500.00
10.0		S/F power plug point with all accessories :-				
	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 1 nos. 3 pin 5/6 amps modular socket outlet and one no. 5/6 amps modular switch, connection, painting etc. as required.	Each	365.00	288.00	105120.00
11.0		S/F power plug point with all accessories :-				
	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5/6 amps modular socket outlet and 15/16 amps modular switch, connection, painting etc. as required.	Each	725.00	366.00	265350.00
12.0		Supplying and fixing 5 amps. to 32 amps. rating, 240 volts 'C' series, miniature circuit breaker (MCB) suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.10.1	Single pole	Each	2010.00	141.00	283410.00
13.0		Supplying and fixing following rating, double pole, (single phase and neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current Poin upto 300 miliampere in the existing MCB DB complete with connections,testing and commissioning etc. as required :				
i	2.14.1	25 amps	Each	123.00	1318.00	162114.00
14.0		Supplying and fixing following way, prewired SP & N MCB distribution board of sheet steel for 240 volts,on surface /recess, complete with loose wire box,terminal blocks,duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar,neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.7.4	2 + 4 way Double Door	Each	8.00	2152.00	17216.00
	2.7.5	2 + 8 way Double Door	Each	2.00	2572.00	5144.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
15.0	2.18	Supplying and fixing 20 amps , 240 volts, SPN, industrial type socket outlet , with 2 poles and earth metal enclosed plug top along with 20 amps. "C" series, SP MCB in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	Each	40.00	693.00	27720.00
15.0	2.20	Supplying and fixing 30 amps , 415 volts, TPN, industrial type socket outlet , with 2 poles and earth metal enclosed plug top along with 20 amps. "C" series, SP MCB in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	Each	24.00	693.00	16632.00
16.0		Supplying and fixing following way, prewired TP & N MCB distribution board of sheet steel for 415 volts, on surface /recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators).				
i	2.8.5	4 way (4 + 12), Double door, horizontal type	Each	17.00	6345.00	107865.00
	2.8.6	6 way (4 + 18), Double door, horizontal type	Each	19.00	8197.00	155743.00
ii	2.8.7	8 way (4 + 24), Double door, horizontal type	Each	29.00	8984.00	260536.00
	2.8.8	12 way (4 + 36), Double door, horizontal type	Each	20.00	11042.00	220840.00
17.0		Supplying & fixing following rating, four pole (three phase & neutral), 415 volts residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.15.1	25 Amp.	Each	10.00	1679.00	16790.00
ii	2.15.2	40 Amp.	Each	40.00	1703.00	68120.00
	2.15.3	63 Amp.	Each	35.00	1965.00	68775.00
18.0	2.9	Supplying and fixing following way prewired vertical type TP & N MCB distribution board of steel sheet for 415 volts on surface/recess complete with loose wire box of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, terminal connectors for all incoming and outgoing circuits, duly prewired with adequate size of FR PVC insulated copper conductor upto the terminal connector/neutral link, earthing etc as required (But without MCB/RCCB/Isolator). (Note: Prewired vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
	2.9.7	8 Way double door	Each	2.00	9606.00	19212.00
	2.9.8	12 Way double door	Each	2.00	12762.00	25524.00
19.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc, with coke and salt) as required.	Set	4.00	3996.00	15984.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
20.0	5.8	Supplying and laying 25 mm x 5 mm. Copper strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolts & spring washer spaced at 50 mm)	RM	64.00	680.00	43520.00
21.0	5.9	Supplying and laying 25 mm x 5 mm. G.I. strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of GI nut bolts & spring washer spaced at 50 mm)	RM	64.00	97.50	6240.00
22.0	5.14	Providing & fixing 25mm x 5mm Copper. strip on surface or in recess for connections etc. as required.	RM	200.00	766.00	153200.00
23.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
24.0	2.21	Providing and fixing M.V. danger notice plate of 200mmx150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	Each	8.00	121.00	968.00
25.0	1.35	Erection of wall bracket / ceiling fittings of all sizes and shapes containing upto two GLS lamps per fitting, complete with all accessories including connections etc. as required.	Each	928.00	39.00	36192.00
26.0	1.41	Installation, testing and commissioning of prewired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tubes etc. directly on ceiling / wall, including connection with 1.5 sq. mm. PVC insulated, copper conductor, single core cable etc. as required.	Each	194.00	69.50	13483.00
27.0	1.45	Installation, testing and commissioning of ceiling fan including wiring the down rod of standard length (upto 30 cm.) with 1.5 sq. mm. FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Each	720.00	99.00	71280.00
28.0	1.50.1	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connections, testing, commissioning etc. as required.	Each	16.00	163.00	2608.00
29.0	1.51	Extra for fixing the louvers / shutters complete with frame for exhaust fans of all sizes.	Each	16.00	68.50	1096.00
30.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	405.00	40500.00
ii	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	464.00	46400.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
iii	4.1.3	300 mm width X 50 mm depth X 1.6 mm thickness	RM	80.00	677.00	54160.00
31.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
	9.1.30	3.5 X 300 sq. mm (70mm)	Each	42.00	867.00	36414.00
	9.1.29	3.5 X 240 sq. mm (62mm)	Each	8.00	771.00	6168.00
	9.1.33	4 x 16 sq. mm (28mm)	Each	20.00	188.00	3760.00
32.0	7.5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.5.4	Above 185 sq. mm and upto 400 sq. mm	RM	900.00	44.00	39600.00
33.0	7.8	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	RM	500.00	16.50	8250.00
	7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	RM	900.00	72.50	65250.00
34.0	8.5	Laying of one number XLPE power cable of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.				
	8.5.2	Above 120 sq. mm. and upto 400 sq. mm.	Metre	250.00	231.00	57750.00
35.0		Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	3.00	14225.00	42675.00
36.0		Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	1.00	19128.00	19128.00
37.0	18.12	Providing and fixing G.I. pipe complete with G.I fittings including trenching and refilling etc.				
	18.12.7	65 mm dia nominal bore	RM	50.00	453.55	22677.50
	18.12.8	80 mm dia nominal bore	RM	50.00	573.40	28670.00
Total carried to DSR Items					Rs.	12744192.50
II) NON SCHEDULED ITEMS						
1.0		Supplying & fixing following rating, three pole , 415 volts residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliampere in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i		32 Amp.	Each	40.00	1800.00	72000.00
2.0		S/F power plug point with all accessories :-				
		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing Two nos. 3 pin 5/6 amps modular socket outlet and One no. 5/6 amps modular switch, connection, painting etc. as required.	Each	769.00	300.00	230700.00
3.0		Supply and installation of plug-in-type telephone socket outlet with 1.2mm thick outlet box and cover plate complete as required in 3 module plate (1 socket with 2 blank plate).				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		RJ - 11	Each	150.00	116.00	17400.00
4.0		Supply, installation, testing and commissioning of Cat - 6 flush mounted information outlets wired according to T568B standard with a faceplate. The plastic shall be high impact, flame retardant & UL-rated thermoplastic with minimum insulation.				
		Single surface mount/recessed box with jacks (RJ-45) I/O	Each	769.00	126.00	96894.00
5.0		Supply, laying, testing and commissioning of 4 pair Cat - 6 non plenum cable of 24 AWG solid copper conductors in existing conduits.	Rm	15000.00	26.00	390000.00
6.0		Supplying, fixing, connecting & testing of Telephone Tag Block krone type in a suitable size 1.6 mm thick dust and vermin proof Sheet steel enclosure duly painted by synthetic enamel over anti corrosive primer, lockable and hinged cover with provision for cable through glands complete in all respects.				
i		50 pair krone	Each	4.00	602.00	2408.00
7.0		Supplying and Earthing with Cu earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc, with coke and salt) as required.	Set	8.00	6010.00	48080.00
8.0		Providing & fixing 50mm x 6mm G.I. strip on surface or in recess for connections etc. as required.	Rm	100.00	111.00	11100.00
9.0		Providing & fixing 50mm x 6mm Cu. strip on surface or in recess for connections etc. as required.	Rm	100.00	1001.00	100100.00
10.0		S/F of hexagonal fan box with hexagonal side of approx. 80 mm.in length fabricated from 14 SWG M.S. sheet incorporating with 10 mm. dia. M.S. round bar duly bent for supporting fan hanger painted with red oxide and screwing arrangement with wiring conduit laid in the R.C.C. roof before concreting along with supply of all materials, labour, T&P etc. for proper completion of work.	Each	720.00	255.00	183600.00
11.0		Supply, laying, jointing, testing and commissioning of ISI marked (IS : 14930, part 2) H.D.P.E. (DWC) Double wall Corrugated pipe for cable laying having corrugation on outer wall and plain smooth surface at inner side including transportation upto the site, jointing, providing and fixing all fittings i.e. sockets, couplers, reducers, end caps etc to complete the works in all respects.				
i		300 mm. ID	RM	300.00	803.00	240900.00
ii		150 mm. ID	RM	200.00	546.00	109200.00
12.0		Supply of wall mounted mirror light fixtures complete as per standard item with copper wiring and GLS / CFL lamps as required as per the standard catalogue item approved by engineer-in-charge.				
i		1 x 11 W	Each	54.00	700.00	37800.00
13.0		Supply of wall / ceiling surface mounted T5 fluorescent tube light luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required each fluorescent tube etc complete as required as per the standard catalogue item as approved by engineer-in-charge . power factor shall not be less than 0.95 and THD shall be less than 10%				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i		1 x 18 watt (BBS170 1xDLED -5000 PSU WH) 15 W LED Downlighter	Each	356.00	2100.00	747600.00
ii		1 X 43 w led Flat Panel (RC366B LED33-5000 PSU OD WH)	Each	521.00	9265.00	4827065.00
iii		3 x 14 W Recessed mounted Light (RC795B 3xTL-514W EBP)	Each	1119.00	5820.00	6512580.00
iv		1 x 28 W T5 (CRCA Body)(TMS122 M 1xTL5-28W EBT)	Each	147.00	1170.00	171990.00
v		2 x 28 W T5 (CRCA Body) TMS122 M 2xTL5-28W EBT	Each	44.00	1560.00	68640.00
14.0		Supplying of 240V, 1 phase Ceiling Fans complete with suitable length down rod as required. The fan should be five star rating as per BEE.				
i		1200mm sweep	Each	720.00	1305.00	939600.00
15.0		Supplying of 240V, 1 phase Exhaust fans with 1.5 Sqmm insulated copper conductor wires for connections complete as required. The exhaust fan should be five star rating as per BEE.				
		450mm sweep	Each	16.00	1150.00	18400.00
16.0		Supplying testing & commissioning for following size of XLPE aluminium conductor armoured cable of 1.1 KV grade as required.				
i		3.5 Core 300 sq. mm. Armoured Aluminium cable.	RM	1000.00	1407.00	1407000.00
ii		3.5 Core 240 sq. mm. Armoured Aluminium cable.	RM	800.00	1155.00	924000.00
iii		4 x 16 sq.mm. Armoured Aluminium cable.	RM	500.00	151.00	75500.00
17.0		Erection of wall bracket / ceiling fittings of all sizes and shapes containing three/four lamps per fitting, complete with all accessories including connections etc. as required.	Each	1119.00	40.00	44760.00
18.0		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Following Panels, fabricated out of 14/16 Gauge CRCA sheet steel in cubicle compartmentised modular construction complete with supporting rigid structure, interconnections, aluminium bus bar strip with heat shrinkable colour coded current density of bus bar 0.8 A per sqmm Identification on all breakers & MCCB to indicate the area they serve. Degree of protection IP 42, earthing hinged doors with 2.5 sqmm tinned braded copper wire, free standing floor mounted with removable Gland Plates on top & bottom of the panel, all mounting plates shall be GI sheets. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. Galvanised hardwares with zinc passivation shall be used in fabrication of panels 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system.				
		All Panel's outgoings have to be equipped with KWH energy meter.				
i		Main LT Panel				
		Incoming: (Transformer)				
		One (1) Nos 1250A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-1250A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Incoming: (DG 1 & 2)				
		Two (2) Nos.800A TPN MCCB (35KA)				
		Metering:				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Two (2) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		Two (2) Nos. (0-800A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		Two (2) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Coupler:				
		1250A, FP EDO ACB				
		Bus Bar:				
		1600A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each. 800A TPN MCCB				
		Three (3) Each. 500A TPN MCCB				
		Two (2) Each. 100A TPN MCCB				
		Two (2) Each. 63A TPN MCCB	Set	1.00	1850000.00	1850000.00
ii		Ground Floor Panel				
		Incoming:				
		One (1) Nos.800A FP EDO ACB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-800A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		1000A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 100A TPN MCCB				
		Fifteen (15) Nos. 63A TPN MCCB				
		Seven (7) Nos. 32A TPN MCB				
		Nine (9) Nos. 32A TPN MPCB				
		Four (4) Nos. 25A DP MCB	Set	1.00	250000.00	250000.00
iii		Ground Floor UPS Panel				
		Incoming:				
		One (1) Nos.100A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-100A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		125A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Eight (8) Nos. 40A TPN MCB	Set	1.00	50000.00	50000.00
iv		First Floor Panel				
		Incoming:				
		One (1) Nos.500A TPN MCCB				
		Metering:				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-500A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		630A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Eight (8) Nos. 63A TPN MCCB				
		Two (2) Nos. 40A TPN MCB				
		Six (6) Nos. 32A TPN MCB				
		Five (5) Nos. 32A TPN MPCB				
		Three (3) Nos. 16A TPN MPCB				
		Four (4) Nos. 25A DP MCB	Set	1.00	200000.00	200000.00
v		First Floor UPS Panel				
		Incoming:				
		One (1) Nos.63A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Five (5) Nos. 25A TPN MCB	Set	1.00	35000.00	35000.00
vi		Second Floor Panel				
		Incoming:				
		One (1) Nos.800A FP EDO ACB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-800A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		1000A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 400A TPN MCCB				
		Five (5) Nos. 63A TPN MCB				
		Four (4) Nos. 40A TPN MCB				
		Seven (7) Nos. 32A TPN MPCB				
		Two (2) Nos. 16A TPN MPCB				
		Three (3) Nos. 25A DP MCB	Set	1.00	250000.00	250000.00
vii		Second Floor UPS Panel				
		Incoming:				
		One (1) Nos.400A TPN MCCB				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-400A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		500A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Five (5) Nos. 32A TPN MCB				
		Six (6) Nos. 63A TPN MCCB	Set	1.00	85000.00	85000.00
viii		Third Floor Panel				
		Incoming:				
		One (1) Nos.500A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-500A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		630A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Two (2) Nos. 200A TPN MCCB				
		One (1) Nos. 63A TPN MCB				
		Ten (10) Nos. 40A TPN MCB				
		One (1) Nos. 32A TPN MCB				
		Seven (7) Nos. 32A TPN MPCB				
		Three (3) Nos. 25A TPN MCB				
		Two (2) Nos. 16A TPN MPCB				
		Three (3) Nos. 25A DP MCB	Set	1.00	200000.00	200000.00
ix		Third Floor UPS Panel				
		Incoming:				
		One (1) Nos.200A TPN MCCB				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-200A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		250A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Nos. 63A TPN MCCB				
		Two (2) Nos. 32A TPN MCB	Set	1.00	65000.00	65000.00
x		Capacitor Panel (250 KVAR)				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Automatic control panel with capacitors, fabricated out of 2 mm thick CRCA sheet steel in cubicle compartmentised modular construction, free standing floor mounted. Cable gland plates shall be provided on top the panels. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system. Galvanised hardwares with zinc passivation shall be used in fabrication of panels.				
		Incoming				
		800 Amps FP electrically operated fully drawout type air circuit breaker as per specification and with following accessories:				
		96 x 96 sqmm 0-800 A digital Ammeter with selector switch, CTs				
		Phase indicating light shall be protected by 2 Amps SP MCBs – 3 sets				
		Power factor compensating relay (including power factor meter) in 7 steps for automatic cut off or add on capacitor units to keep the power factor at 0.97 with variation of loads. All associated auxiliary contactors / relays / timer / auto manual selector switches to be provided – 1 set				
		Bus Bars				
		1000 Amps TPN aluminium bus bars with coloured heat shrinkable insulated sleeves – 1 set				
		Outgoing				
		Outgoing feeders consisting of following accessories :				
		2 Sets – 200 Amps TP MCCB, capacitor duty contactors & 100 KVAR heavy duty capacitors.				
		4 Sets – 63 A TP MCCBs, capacitor duty contactors & 25 KVAR heavy duty capacitors.				
		Auto Manual Selector switch push button and indicating lamps. – 9 Sets	Set	1.00	500000.00	500000.00
xi		External Feeder panel with timer and contractor				
		Incoming:-				
		(1) No. 63A FP MCCB (35 KA).				
		Metering:				
		One (1) No. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) No. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each.32A TPN MCB	Set	1.00	25000.00	25000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
19.0		Supply, Installation, testing, Commissioning of LPI Stormaster ESE type advance lightning protection complete with the lightning air terminal - Configured as a Spheroid which is comprised of separate electrically isolated 4 panels surrounding an Earthed Central Finial. The Insulation material used to electrically isolate the panels shall be comprised of a base polymer which provides high Ozone & UV resistance with di-electric strenght of 24-38 KV/mm tested as per NFC 17-102 & IEC 60-1:1989. The ESE teRminal shall not contain any electronic circuits or any moving parts for its operation. The ESE teRminal shall be tested & certified by CPRI (Central Power Research Institute, Govt of India) for the Impulse current of 45 KA (8/20 micro sec) with 5 positive & 5 negative impulse. The ESE teRminal shall be approved by DGMS (Director General of Mines Safety), Govt of India.				
i		Model: Stormaster 60	Each	1.00	175000.00	175000.00
ii		LPI Upper Termination Kit	Each	1.00	30000.00	30000.00
iii		LPI Lower Termination Kit	Each	1.00	4500.00	4500.00
iv		FRP Mast (2mtr) with Inline Coupling Unit	Each	1.00	20000.00	20000.00
v		GI Mast (3 mtr) with guy wire kit	Each	1.00	10500.00	10500.00
20.0		Supply, Installation, testing, Commissioning of J K Maintenance Free Chemical Gel Earthing - Dual Pipe (GI) Technology of "JK CHENSODE" 3mtr long 80mm dia permanently sealed at both the ends with the lead terminal at the top along with 50 kgs of duly filled with metallic conducting compound permanently sealed at both the ends with the lead teRminal at the top along with 50 kgs of "RESLOW" grounding minerals duly tested & certified by CPRI. The earth pit chamber shall be of heavyduty Polyplastic earth pit cover.	Each	2.00	20000.00	40000.00
21.0		Supply, Installation, testing, Commissioning of specially designed lightning current LPI High Voltage Shielded Cable (HVSC) 7 layer cable consisting of Inner Core, Concentric Conductor (copper), Inner binding tape, Insulation material, Metallic screen, Outer binding tape, Outer sheath with the nominal cross sectional area of 50 sq.mm & overall diameter of 37mm with the insulation resistance of 1830 M Ohm-km, tested for 200 KV as per IEC 600601 connected to the Stormaster terminal with the factory upper termination & connected to the earth pit with the lower terminal kit to safely route the lightning current.	Rm	80.00	4000.00	320000.00
22.0		H.V. PANEL (33 KV - VCB PANEL)				
		Supply, installation, testing & commissioning of indoor type floor mounted metal clad, IP 52, 33 KV VCB panel with 3 nos VCB (1 incomer and 2 out goings), totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS : 13118, as ammended upto date and additional specifictions, having capacities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker suitable for use on 33 KV, 3 Phase, 50 Hz A. C. supply with short circuit fault level of 1000 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated Aluminium alloy bus bars of suitable fault level, G.I. earth bar, earth bar, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil, control voltage of 24 Volt DC, TNC, LED type indicating lamps for phases and trip conditions and auxiliary switch of 6 NO + 6 NC and equipped with following switchgears and accessories.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		The panel should be suitable for connections for up to 3 x 300 sq.mm XLPE 33 KV cable (cable entry from bottom), end termination with heat shrinkable jointing material etc. as required. (The Cost of end termination not included in this item)				
		power pack (1 working & 1 standby) with 220 Volt AC input & 24 Volt DC continuous output suitable for indicating lights & closing / tripping / indication of 3 Nos. HT panel boards with 2 Nos. 12 Volts each maintenance free batteries of suitable AH each, charging unit, capacitor bank for emergency delivering for trip system complete with suitable capacity of Ammeter & Voltmeter i/c connections with 2.5 sq.mm FRLS insulated copper conductor cable etc. including DC DB consisting of 8 nos 32 Amp DP MCB's for DC supply distribution to panels as required.				
		Incoming - 1 No. 630 Amp. VCB with followings -				
		(a) 1 set (3 nos) 33 KV / v3 / 110 / v3 Volts drawout type PT Class 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering.				
		(b) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-0.5 for metering and class 5P10 for protection.				
		(c) 1 No. - (0-200A) Ammeter, analog type with selector switches.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay				
		(f) Microprocessor based numerical relay with IDMT setting for O/L, E/F and S/C protection.				
		(g) Restricted earth fault relay				
		(h) Over and Under voltage relay.				
		(i) Timer and TNC switch				
		Outgoing - 2 Nos. - 630 A VCB with followings in each breaker -				
		(a) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-1 for metering and class 5P10 for protection.				
		(b) (0-200A) Ammeters, dual scale analog type & selector switches for ammeters.				
		(c) Microprocessor based numerical relay with IDMT & instantaneous element for O/L, E/F and S/C protection.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay	Sets	1.00	1500000.00	1500000.00
23.0		Supply of 3 core stranded aluminium conductor 33 KV grade XLPE (E) (Cross linked Polyethylene) insulated PVC bedded, Galvanised flat steel strip armoured cable confirming to IS : 7098 (part II with latest amendments)				
		240 sq. mm 3 core	RM	250.00	6500.00	1625000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
24.0		Design, manufacture, testing at works supply, installation, testing and commissioning at site 33 KV/440V, 3 phase, 50 Hz, delta/star connected, outdoor type following sizes of transformers, oil immersed ONAN cooled, complete with all fittings such as oil conservator, silica gel breather, thermometer, explosion vent, Local ON LOAD tap changer with RTCC for +5% & -15% tapplings in step of 1.25 bidirectional roller, diagram & rating plate, oil temperature indicator, winding temperature indicator and buchooltz relay with wiring upto marshalling box, lifting lugs, first filling of oil, weather proof HT cable box, LT bus duct disconnecting chamber minimum 8 mm thick non magnetic gland plate etc. complete as per specification including 10% extra oil in non returnable drum for topping up as required. (The transformer shall be subject to all tests specified in the specifications and test certificates shall be produced)				
		750 KVA	No.	1.00	1850000.00	1850000.00
25.0		DIESEL GENERATING SETS				
25.1		Supply, erection, connecting testing and commissioning of following silent type 3 phase 415 volts 50 cycle per second 1500 RPM complete with engine alternator, radiator etc. The engine shall be complete with flywheel to suit flexible coupling with guard, air cleaner, fuel pump, variable speed governor, fuel filter, lube oil filter, pump and cooler starter water pump, battery charging generator, voltage regulator, 24 volt charged batteries of adequate capacity and instrument panel comprising switch with key, lube oil temperature gauge, lube oil pressure gauge, water temperature gauge, battery charging ammeter, safety control for low lube oil pressure and high cooling water temperature with tripping. The cost should be inclusive of the Acoustic enclosure also.				
		Costs allowed shall include full day oil tank/piping, Acoustics Enclosure, AMF Panel with Change Over Switch arrangement suitable for Cable connections from transformer with required number of runs as per SLD etc.				
i		500 KVA	Nos.	2.00	3500000.00	7000000.00
25.2		DG Exhaust				
i		SITC of following sizes of MS pipes of thickness 5.2 mm including all accessories and MS/GI supports as required.				
		250 MM (NB) MS ERW Pipe	RM	70.00	2500.00	175000.00
ii		S&F of 50 MM thick mineral wool insulation (of 93 Kg. per cubic meter density) over the exhaust pipes of following diameter so that the temprature at the surface of pipe should not exceed 50 degree centigrade.				
		250 MM (NB) MS ERW Pipe	RM	70.00	450.00	31500.00
iii		SITC of following sizes of SS Flexible Exhaust bellows for the following pipes				
		250 MM (NB) MS ERW Pipe	Nos.	2.00	9500.00	19000.00
iv		S&F of 50 MM thick mineral wool insulation (of 93 Kg. per cubic meter density) over the silencers of one generator so that the temprature at the surface of pipe should not exceed 50 degree centigrade.				
		For 630 KVA DG Set	Nos.	2.00	10000.00	20000.00
v		S&F of miscellaneous Structural Support for exhaust pipes chimney of 30 meter	Kg	9000.00	50.00	450000.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
vi		Supply of HT 11 KV rubber hand gloves as per relevant IS Code	Set	2.00	1000.00	2000.00
vii		Supply and fixing CO2 type fire extinguisher conforming to IS 2876 with cylinder duly charged of capacity 4.5 kgs including fixing clamps brackets, bolts and nuts etc. as required.	Nos.	4.00	3500.00	14000.00
vii		Supplying of fire buckets of 9 litres capacity quality painted white from inside and red from outside and having inscription "FIRE" in white conforming to IS 2546-1974 duly amended upto date as required.	Nos.	4.00	5000.00	20000.00
viii		Sand Buckets-Set of Four	Nos.	1.00	2500.00	2500.00
ix		Supplying of first aid box with cover made out of 16 SWG MS sheet of size 450 mm x 600 mm x 200 mm and painted with two coats of enamel paint over one coat of steel primer and having inscription "FIRST AID BOX" in white and a red cross of suitable size with following items:				
		- 1 No. band-aid bandage 150mm				
		- 1 No. Savlon soap 100 ml				
		- 1 No. Bottle betadine 30 ml				
		- 1 No. Roll cotton				
		- 1 No. Packet dressing material	Set	1.00	1500.00	1500.00
x		Mechanical foam with trolley	Set	2.00	6500.00	13000.00
xi		Supply, installation of 1.1 KV grade ISI marked rubber mats of 1 meter width.	RM	20.00	1200.00	24000.00
xii		Supply of standard First Aid Box. (as per relevent standard)	Nos..	1.00	1000.00	1000.00
		TOTAL FOR NON DSR ITEMS				34135817.00

**BILL OF QUANTITIES
FIRE PROTECTION WORKS**

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I		SUB HEAD (I) :- ELECTRICAL				
		DSR ITEMS				
1.0		Supplying and making end terminations with brass compression glands and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				
i	9.1.27	3.5 Core 185 sq. mm. Armoured Aluminium cable.	Nos.	4.00	616.00	2464.00
	9.1.21	3.5 Core 95 sq. mm. Armoured Aluminium cable.	Nos.	4.00	714.00	2856.00
	9.1.19	3.5 Core 50 sq. mm. Armoured Aluminium cable.	Nos.	8.00	601.00	4808.00
2.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	405.00	40500.00
	4.1.4	101 mm width X 50 mm depth X 1.6 mm thickness	RM	50.00	677.00	33850.00
3.0	7.7	Laying and fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 kV grade of following size				
	7.7.1	Upto 35 sq. mm (clamped with 1 mm thick saddle)	RM	30.00	19.50	585.00
	7.7.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40 x 3mm)	RM	70.00	69.00	4830.00
		Total C/f to Summary		Total DSR ITEMS [i]		89893.00
ii		One (1) No. Auto Star-Delta starter for 10.0 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	1	20000.00	20000.00
2.0		Supplying and making end terminations with brass compression glands and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				
i		4 Core 4 sq. mm. Armoured Aluminium cable.	Nos.	2.00	125.00	250.00
		4 Core 2.5 sq. mm. Armoured Aluminium cable.	Nos.	4.00	85.00	340.00

3		Supply,testing and commissioning of 1100 Volt grade XLPE insulated and sheathed aluminium conductor Armoured cables including the cost of providing required gap between adjacent cables (minimum one cable dia.) and including the cost of providing identification tags etc. complete as per specification, as required.				
iv		4 Core 4 sq. mm. Armoured Aluminium cable.	RM	20.00	91.00	1820.00
v		4 Core 2.5 sq. mm. Armoured Aluminium cable.	RM	15.00	85.00	1275.00
II		FIRE HYDRANT & SPRINKLER SYSTEM				
1.0		Providing, fixing, testing and commissioning of above ground M.S. C-Class Heavy Duty Pipes as per IS : 1239 (upto 150 mm dia.) and IS :3589 (upto 200 mm dia. And above) including cutting, screwing, welding etc. and providing all structural work fabricated from standard sections, (M.S. rounds, angles, channels etc.) and fittings like flanges, bends, tees, elbows, reducers, clamps, hangers, fasteners etc. including cutting, drilling, welding, cutting holes and chases in bricks /RCC walls/ slabs complete with painting of one coat of rich zinc primer and 2 or more coats of synthetic enamel paint of approved make / shade complete as per specification.				
i		150 mm dia.	RM	80	1750.00	140000.00
ii		80 mm dia.	RM	70	1050.00	73500.00
iii		25 mm dia.	RM	15	420.00	6300.00
2.0		Providing and Fixing M.S. pipe to I.S. 1239 (Medium duly) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets,reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. (for drain pipe) .The cost shall include the MS/GI structural supports as per <u>approved drawings and specifications</u> .				
a)		80 mm dia	Metre	60.00	735.00	44100.00

3.0		Providing and fixing ISI marked S.S. fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).	Each	15	5940.00	89100.00
4.0		Providing and fixing first aid fire hose reel drum wall mounting & swinging type fitted with 20 mm dia 36.5 m long high pressure hose to I.S. 5132 with 5 mm outlet SS nozzle with shut off valve (I.S. 884-1969). Name of Manufacturer should be embossed on the drum.	Each	12	7335.00	88020.00
5.0		Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification	Each	30	3837.00	115110.00
6.0		Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	15	1885.00	28275.00
7.0		Providing and fixing standard fireman's axe with heavy insulated rubber handle tested for 20000 watts.	Each	12	836.00	10032.00
8.0		Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.				
a)		Four way	Each	1.00	20260.00	20260.00

9.0		Providing, fixing, testing & commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate, 200 mm in diameter and 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968. (The cushion tank should be suitable for rated working pressure.	Each	3.00	12913.00	38739.00
10.0		Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)				
a)		25 mm dia full bore type	Each	12.00	769.00	9228.00
11.0		Providing and fixing fully glazed fire hose cabinet door 2000x800 mm depth fabricated with 20x20x3 mm and 40x20x3 mm hollow box sections mounted with 3 Nos 100 mm M.S. anodised butt hinges on M.S. angle frame of 45x45x5 mm size with hold fasts fixed to wall with PCC (1:2:4) blocks 100x100x100 mm including hasp and steeple for locking with pad lock arrangement, 4 mm thick clear float glass panel "FIRE HOSE" written on it with fire red, stove enamelled red paint to M.S. sections, black paint on inner side of lower glass panel complete as per approved detail.	Each	12.00	6638.00	79656.00
12.0		Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle at terrace)	Each	3.00	4049.00	12147.00
13.0		Providing and fixing cast iron butterfly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table "E" complete in all respects.				
a		80 mm dia with lever operated	Each	3.00	3904.00	11712.00
b		150 mm dia with lever operated	Each	12.00	7335.00	88020.00

14.0		Providing and fixing C.I. double flanged horizontal dual plate wafer type non return valves PN 1.6 including washer, nuts, bolts, 3 mm thick compressed asbestos gasket companion flanges as per table "E" complete.				
a		150 mm dia	Each	1.00	17459.00	17459.00
15.0		Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	3.00	613.00	1839.00
16.0		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	12.00	278.00	3336.00
17.0		Providing and fixing 'Y' strainer with CI body and S.S. strainer for outlet of OHT lines. (Terrace Level)				
a)		150 mm dia	Each	1.00	10124.00	10124.00
18.0		Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:				
a)		150 mm dia.	Each	4.00	6638.00	26552.00
III HAND APPLIANCES (INTERNAL)						
		Note: All extinguishers shall carry ISI mark.				
1		Providing and fixing water based CO2 type extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve 30 cms long high pressure discharge hose, discharge nozzle, suspension bracket, ISI marked as per IS:934 finished externally with red enamel paint and fixed to wall with brackets complete with internal charges.				
a)		Capacity 9 lit.	Each	12	8000.00	96000.00
b)		Capacity 22.5 kg.(Trolley mounted)	Each	1	15000.00	15000.00
2		Providing and fixing CO2 extinguisher consisting of seamless MS cylindrical body squeeze lever discharge valve, internal discharge tube, 30 cms long high pressure discharge hose, discharge nozzle ISI marked as per IS 2878 including fixing with dash fasteners etc. complete.				
a)		Capacity 4.5 Kg	Each	12	5500.00	66000.00

3		Providing and fixing mechanical foam type (ISI marked) fire extinguishers consisting of welded M.S. cylindrical body squeeze lever discharge valve 30 cm long high pressure discharge hose, discharge nozzle, suspension bracket as per ISI marked finished externally with red enamel paint and fixed to wall with brackets complete with internal charger.				
a)		Capacity 9 lit.	Each	12	6500.00	78000.00
b)		Capacity 50 lit.(Trolley mounted)	Each	1	25000.00	25000.00
		TOTAL SUMMARY				
IV		SPRINKLER SYSTEM (INTERNAL)				
1.0		Providing and Fixing M.S. pipe to I.S. 1239 (Heavy class) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets, reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. Pipe upto 50 mm dia will be with threaded joints with holdtite and 65 mm dia and above will be with welded joint. The cost shall include the MS/GI structural supports as per approved drawings and specifications.				
a)		25 mm dia	Metre	4000.00	420.00	1680000.00
b)		32 mm dia	Metre	400.00	500.00	200000.00
c)		40 mm dia	Metre	500.00	600.00	300000.00
d)		50 mm dia	Metre	600.00	700.00	420000.00
e)		65 mm dia	Metre	500.00	850.00	425000.00
f)		80 mm dia	Metre	250.00	1050.00	262500.00
g)		100 mm dia	Metre	450.00	1500.00	675000.00
h)		150 mm dia	Metre	120.00	1750.00	210000.00
2.0		Providing and fixing 15 mm Chrome plated gunmetal sprinkler head with quartz bulb and set to operate at specified temperature pendent/upright/ side wall as per instruction.				
		Temperature of operation 68 deg..C K-80				
a)		Normal Responce Pendent type	Each	1500.00	245.00	367500.00
b)		Normal Responce Upright type	Each	600.00	245.00	147000.00

c)		Normal Responce Side wall	Each	10.00	334.00	3340.00
		Standard concealed sprinkler 68° C.	Each	10.00	334.00	3340.00
3.0		Providing & fixing inspecting testing assembly with drain valve arrangement as per approved drawing..				
a)		50 mm dia	Each	3.00	7251.00	21753.00
4.0		Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)				
a)		25 mm dia	Each	3.00	557.00	1671.00
5.0		Providing and fixing electrically operated flow indicating switches System Sensor or Potter brand in sprinkler branch line on each floor with necessary junction box installed in accessible place.				
		80 mm dia	Each	3	3235.00	9705.00
c)		100 mm dia	Each	12	4000.00	48000.00
		150 mm dia	Each	12	4250.00	51000.00
6.0		Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	12	278.00	3336.00
7.0		Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	3	613.00	1839.00
8.0		Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete				
c)		80 mm dia with lever	Each	3	1115.00	3345.00
		100 mm dia with lever	Each	12	1115.00	13380.00
d)		150 mm dia with lever	Each	12	1394.00	16728.00
9.0		Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:				
a)		150 mm dia.	Each	4.00	2231.00	8924.00
V		EXTERNAL FIRE HYDRANT				

1.0		Excavating trenches of required width for pipes, etc. including excavation for sockets and dressing of sides in hard/dense soil, ramming of bottom, depth upto 1.5 m including getting out the excavated soil and then returning the soil as required in layers not exceeding 200mm in depth including consolidating each deposited layer by ramming, watering, and disposal of surplus excavated soil as directed within a lead of 100 m.				
a)		Pipes, upto 300 mm dia	Cum	100.00	279.00	27900.00
2.0		Providing and fixing M.S pipes conforming to IS. 1239 heavy duty including all fittings like couplings, bends, elbows, offsets, blind flanges, plugs, tees, flanges (flanges as per table E), etc. threaded or welded (all type) joints as per detailed specifications as required, with a coat of red oxide primer and two or more coats of synthetic enamel paint of approved colour, cutting holes and chases in brick or RCC walls or floors and making good complete .				
a)		80 mm dia	Metre	10.00	1050.00	10500.00
b)		150 mm dia	Metre	200.00	1750.00	350000.00
3.0		Providing and applying one coat of 4 mm thick 'PYPKOTE' or COATEK anti rust pipe protection including approved primer as per manufacturers specifications and lap of 25 mm and fusing lam to make an impermeable layer on pipes in trenches or on structural/masonry members complete including surface				
a)		80 mm dia	Metre	10.00	100.00	1000.00
b)		150 mm dia	Metre	400.00	128.00	51200.00
4.0		Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).	Each	9.00	5940.00	53460.00
5.0		Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	9.00	1885.00	16965.00

6.0		Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle)(Including cabinet M.S.structure support with primer & painting etc.)	Each	9.00	4049.00	36441.00
7.0		Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification.	Each	18.00	3837.00	69066.00
8.0		Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects.				
a)		80 mm dia with lever	Each	4.00	1115.00	4460.00
b)		150 mm dia with lever	Each	2.00	1394.00	2788.00
9.0		Providing and fixing anchor blocks of concrete 1:2:4 mix (1 cement : 2 coarse nominal size) for Fire pipe including necessary excavation, shuttering and centring, curing complete.(For irrigation line)	Cum	20.00	3841.00	76820.00
10.0		Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.				
a)		Four way	Each	1.00	20260.00	20260.00
VI FIRE PUMPS& ACCESSORIES						

		(All pumps should be supplied with wearing and mechaical seal. Performance curve should be approved before placing the order. All pumps should be supplied with base frame)				
2		Pump:				
		Providing,Fixing Supplying and fixing horizontal centrifugal pump with volute brozne impeller connctected to TEFC induction motor suitable for 400/410 Volts, 3 Phase, 50 Cycles , AC supply with the following specifications:				
a)		Capacity : 900 LPM				
b)		Head : 30 m				
c)		HP : 10 HP approx. or As required.				
d)		RPM : 2900				
e)		Mover : Electric Motor driven				
f)		Material of Construction:				
g)		Shaft & Sleeve : S.S- 410				
h)		Impeller : Bronze				
i)		Bearing : Grease lubricated				
j)		Seal - Mechanical seal.				
n)		Quantity :	Set	1	50000.00	50000.00
		Note: Contractor should submit general arrangement drawings before fabrication of vessel and ultrosonic test report to be submitted on supply of vessel and test to be conducted at the presence of Plumbing-In-Charge.				
5		Providing and fixing cast iron dual plate wafer type non return valves PN 1.6 including nuts, bolts, 1.5 mm thick gasket companion flanges as per table 'E' etc. complete.				
b)		150 mm dia	Each	1	8500.00	8500.00
6		Providing and fixing cast iron butterfly valves conforming to PN1.6 I.S.13095 with "Lever" or gear operated, bolts, nuts, 3 mm thick insertion rubber gasket complete including companion flange as per Table 'E' all complete.				
d)		150 mm dia (lever operated)	Each	1	6500.00	6500.00
12		Providing and fixing vibration elimination pads for pumps.				
a)		Type A	Set	1	3500.00	3500.00

13		Providing and fixing 25 mm dia gun metal fitting for water level indicator gauge with isolation valve at top and bottom, heavy guage transparent polythylene tube of approx. 5 m length with colour indicator float clamped to teak board 100 mm wide x20 mm with graduation in KL.	Each	1	4500.00	4500.00
15		Providing and fixing liquid level controller for fire pump to cut off in case low level of water in tank including cables,pannel ,etc. and making necessary connection to panel and commissioning.	Each	1	5000.00	5000.00
		Total C/f to Summary		Total NS Items [II]		6889415.00

BILL OF QUANTITIES						
SECTION-F: HVAC WORKS						
Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		DSR ITEMS				
I		ELECTRICAL ITEMS				
1.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc, with coke and salt) as required.	Set	2.00	3996.00	7992.00
2.0	5.9	Supplying and laying 25 mm x 5 mm. G.I. strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of GI nut bolts & spring washer spaced at 50 mm)	RM	20.00	97.50	1950.00
3.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
4.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	350.00	405.00	141750.00
ii	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	464.00	46400.00
iii	4.1.3	300 mm width X 50 mm depth X 1.6 mm thickness	RM	200.00	677.00	135400.00
5.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
	9.1.30	3.5 X 300 sq. mm (70mm)	Each	4.00	867.00	3468.00
		Total Carried to Summary				360960.00
		NON DSR ITEMS				
1.0		Ground floor:				
		Supply, Instalation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	8.00	2000.00	16000.00
2.0		First floor:				
		Supply, Instalation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	4.00	2000.00	8000.00
		16 A MPCB	Nos.	3.00	1750.00	5250.00
3.0		Second floor:				
		Supply, Instalation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	6.00	2000.00	12000.00
		16 A MPCB	Nos.	2.00	1750.00	3500.00
4.0		Third floor:				

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Supply, Instalation, Testing & Commissioning of following capacity TPN box made of 1.6mm thick sheet steel enclosure duly painted with powder coating, making connections, earthing etc. as required.				
		32 A MPCB	Nos.	6.00	2000.00	12000.00
		16 A MPCB	Nos.	2.00	1750.00	3500.00
5.0		Ventilation:				
i		Auto Star Delta starter of 15 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	4.00	20000.00	80000.00
ii		Auto DOL starter of 7.5 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	1.00	15000.00	15000.00
ii		Auto DOL starter of 5 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	4.00	12500.00	50000.00
iii		Auto DOL starter of 2 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	4.00	10000.00	40000.00
iv		Auto DOL starter of 1.5 HP with required rating MCCB/ MPCB having single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Nos.	20.00	10000.00	200000.00
6.0		Supplying & making indoor end terminations with brass compression gland and aluminum lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
		4 X 6 sq. mm	Each	96.00	125.00	12000.00
		4 X 4 sq. mm	Each	36.00	100.00	3600.00
		4 X 2.5 sq. mm	Each	4.00	85.00	340.00
7.0		Supplying testing & commissioning for following size of XLPE aluminium conductor armoured cable of 1.1 KV grade as required.				
i		3.5 Core 300 sq. mm	RM	100.00	1407.00	140700.00
		4 X 6 sq. mm	RM	2500.00	112.70	281750.00
		4 X 4 sq. mm	RM	1500.00	91.00	136500.00
		4 X 2.5 sq. mm	RM	50.00	80.00	4000.00
8.0		Ventilation Panel				
		Incoming:				
		One (1) Nos.500A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-500A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				

Sr. No.	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	630A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
	Outgoing:				
	Five (5) Each. 63A TPN MCCB				
	Twenty One (21) Each. 32A TPN MPCB				
	Two (2) Each. 16A TPN MPCB	Set	1.00	350000.00	350000.00
II	AIR CIRCULATION SYSTEM:				
1.0	AIR HANDLING UNIT:				
	Supply, installation, testing and commissioning of factory fabricated Double Skin Chilled/Hot Water sectionalized Air-handling unit horizontal type fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts $\pm$ 10%, 50 Hz $\pm$ 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers. The AHU panels shall be insulated with 43 +/- 2 mm thick insulated with CFC free (PUF panel) & 43 Kg/m³ density.. The motor & blower assembly shall be mounted on Aluminium extruded section only. Self adhesive coated neoprene gasket to be provided between panels and structure of the AHU to ensure the entire housing is airtight. The fan shall be fitted with factory installed non-invasive airflow monitoring station for flow verification (by fan manufacturer), and shall be a standard part of fan assembly. The complete AHU shall conform to standard specification. The face velocity across cooling coil shall be limited to 152 MPM maxm. Expansion bellows with spacers shall be provided at pipe connections. Capacity of Air-handlers shall be as follows:				
	Floor Mounted AHUs (6 Rows coil):				
	Ground floor:				
	4500cfm, 10TR, 5HP, 50mmSP	Nos	1.00	405,000.00	405,000.00
	4900cfm, 11TR, 5HP, 50mmSP	Nos	1.00	441,000.00	441,000.00
	6000cfm, 13TR, 5HP, 50mmSP	Nos	1.00	540,000.00	540,000.00
	6500cfm, 17TR, 5HP, 50mmSP	Nos	1.00	585,000.00	585,000.00
	8500cfm, 18TR, 7.5HP, 50mmSP	Nos	1.00	765,000.00	765,000.00
	9500cfm, 23TR, 7.5HP, 50mmSP	Nos	1.00	855,000.00	855,000.00
	10600cfm, 24TR, 7.5HP, 50mmSP	Nos	1.00	954,000.00	954,000.00
	11200cfm, 24TR, 7.5HP, 50mmSP	Nos	1.00	1,008,000.00	1,008,000.00
	First floor				
	2600cfm, 6TR, 2HP, 50mmSP	Nos	2.00	234,000.00	468,000.00
	8350cfm, 19TR, 5HP, 50mmSP	Nos	1.00	751,500.00	751,500.00
	7600cfm, 18TR, 5HP, 50mmSP	Nos	2.00	684,000.00	1,368,000.00
	12000cfm, 29TR, 7.5HP, 50mmSP	Nos	1.00	1,080,000.00	1,080,000.00
	3400cfm, 8TR, 3HP, 50mmSP	Nos	1.00	306,000.00	306,000.00
	Second floor:				
	3200cfm, 9TR, 3HP, 50mmSP	Nos	1.00	288,000.00	288,000.00
	3300cfm, 8TR, 3HP, 50mmSP	Nos	1.00	297,000.00	297,000.00
	13000cfm, 39TR, 10HP, 50mmSP	Nos	1.00	1,170,000.00	1,170,000.00

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		8300cfm, 19TR, 7.5HP, 50mmSP	Nos	1.00	747,000.00	747,000.00
		9400cfm, 29TR, 7.5HP, 50mmSP	Nos	1.00	846,000.00	846,000.00
		10000cfm, 24TR, 7.5HP, 50mmSP	Nos	1.00	900,000.00	900,000.00
		10100cfm, 25TR, 7.5HP, 50mmSP	Nos	1.00	909,000.00	909,000.00
		10850cfm, 28TR, 7.5HP, 50mmSP	Nos	1.00	976,500.00	976,500.00
		Third floor				
		3200cfm, 7TR, 3HP, 50mmSP	Nos	1.00	288,000.00	288,000.00
		3300cfm, 7TR, 3HP, 50mmSP	Nos	1.00	297,000.00	297,000.00
		5000cfm, 12TR, 5HP, 50mmSP	Nos	1.00	450,000.00	450,000.00
		5700cfm, 12TR, 5HP, 50mmSP	Nos	1.00	513,000.00	513,000.00
		5900cfm, 14TR, 5HP, 50mmSP	Nos	1.00	531,000.00	531,000.00
		10000cfm, 34TR, 7.5HP, 50mmSP	Nos	1.00	900,000.00	900,000.00
		10700cfm, 34TR, 7.5HP, 50mmSP	Nos	1.00	963,000.00	963,000.00
		11800cfm, 43TR, 7.5HP, 50mmSP	Nos	1.00	1,062,000.00	1,062,000.00
2.0		Fan coil Units				
		Supply, installation, testing & commissioning of Horizontal fan coil units, each complete with 3/4 Rows deep chilled water cooling coil, blowers, cleanable filters, main and auxilliary insulated condensate drain pans, casing, coil pipe connections through copper pipes, condensate drain connections, with required Set of ball valves with strainers (supply), without strainers (Return), canvass connections. All fan coil units shall be suitable for 220 ± 10%volts, 50 cycles single phase power supply etc. complete as per specification.				
		Ground floor:				
i		400cfm,1TR	Nos	19.00	10,000.00	190,000.00
ii		800cfm,2TR	Nos	4.00	12,500.00	50,000.00
iii		1200cfm,3TR	Nos	2.00	15,000.00	30,000.00
		First floor:				
i		400cfm,1TR	Nos	18.00	10,000.00	180,000.00
ii		600cfm,1.5TR	Nos	2.00	11,500.00	23,000.00
iii		800cfm,2TR	Nos	3.00	12,500.00	37,500.00
iv		1200cfm,3TR	Nos	1.00	15,000.00	15,000.00
		Second floor:				
i		400cfm,1TR	Nos	18.00	10,000.00	180,000.00
ii		600cfm,1.5TR	Nos	2.00	11,500.00	23,000.00
iii		800cfm,2TR	Nos	2.00	12,500.00	25,000.00
iv		1200cfm,3TR	Nos	4.00	15,000.00	60,000.00
		Third floor:				
i		400cfm,1TR	Nos	18.00	10,000.00	180,000.00
ii		600cfm,1.5TR	Nos	4.00	11,500.00	46,000.00
iii		1200cfm,3TR	Nos	4.00	15,000.00	60,000.00
3.0		Split type AC units				
		Supply, installation, testing and commissioning of invertor based split type AC units with Hi wall indoor units complete with finned coil, fan section with motor, air filters, filter box, double drain pan, wiring & accessories, outdoor air cooled condenser units with accessories (For Server Rooms)				
i		600cfm,1TR	Nos	1.00	25,000.00	25,000.00

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
ii		800cfm,2TR	Nos	6.00	28,000.00	168,000.00
iii		1200cfm,3TR	Nos	4.00	35,000.00	140,000.00
III		AIR OZONE SYSTEM:				
1.0		Supply, Installation , testing , commissioning and handing over of the imported Air Ozone System (UL Listed for smoke & fire - UL 2043) for maintaining indoor Air Quality. The components of the system must be in strict conformity with the specifications.and shall be including freight from Airport to site ,Insurance,Lifting,Shifting etc.as required . Single phase power supply for the Ozone Generators will be provided near the controller by others. The prices to include all connected wiring between the duct mounted ozone generator, VOC sensor / Controller. The power supply to the Ozone monitor will be provided near the respective equipment by others . But the wiring between the ozone moniter / switch and controller will be included in the scope.				
		Duct mounted ozone generators suitable for the following floor area mentioned in the basis of design .				
		Ground Floor				
a)		Libraury - 4500 CFM	SET	1.00	593,100.00	593,100.00
		Second Floor				
b)		Lecture hall2,3,4,5- 9400 CFM	SET	1.00	649,000.00	649,000.00
c)		Lecture hall 1- 10850 CFM	SET	1.00	679,900.00	679,900.00
		Third Floor				
d)		Lecture hall 6,7,8- 11500 CFM	SET	1.00	679,900.00	679,900.00
e)		Lecture hall 9,10,11 - 10700 CFM	SET	1.00	649,000.00	649,000.00
f)		Lecture hall 12,13 - 10000 CFM	SET	1.00	649,000.00	649,000.00
IV		PIPING:				
1.0		Chilled Water & Condensate Drain Piping:				
		Supplying, laying, fixing, testing & commissioning MS class 'C' pipes (G.I. 'B' class for condensate drain), valves, strainers and accessories cut to required length with necessary, clamps, supports, antivibration pads, hangers, fittings such as bends, tees, reducers, flanges etc and installed with all welded joints complete as per specification & drawings and insulated with factory laminated closed cell insulation of class "O" rating of 19mm thickness for chilled water pipes & 9mm thickness for condensate drain				
		Mild steel pipes:				
i		300 mm dia MS pipes	RM	325.00	2,750.00	893,750.00
ii		200 mm dia MS pipes	RM	155.00	2,350.00	364,250.00
iii		150 mm dia MS pipes	RM	160.00	2,075.00	332,000.00
iv		125 mm dia MS pipes	RM	165.00	2,000.00	330,000.00
v		100 mm dia MS pipes	RM	17.00	1,800.00	30,600.00
vi		80 mm dia MS pipes	RM	295.00	1,550.00	457,250.00
vii		65 mm dia MS pipes	RM	334.00	1,300.00	434,200.00
viii		50mm dia MS pipes	RM	190.00	975.00	185,250.00
ix		40mm dia MS pipes	RM	105.00	850.00	89,250.00
x		32mm dia MS pipes	RM	370.00	700.00	259,000.00
xi		25mm dia MS pipes	RM	165.00	625.00	103,125.00
xii		20mm dia MS pipes	RM	310.00	600.00	186,000.00

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
2.0		Supply and Installation of PVC Pipe (4kg) for AHU Drain & Fresh air connection for Cassette units of the following sizes				
i		40 mm dia PVC pipes	RM	135.00	900.00	121500.00
ii		32 mm dia PVC pipes	RM	350.00	800.00	280000.00
3.0		Providing and fixing in position Butterfly valves				
i		80 mm dia	Nos	8.00	4,000.00	32,000.00
ii		65mm dia	Nos	16.00	3,650.00	58,400.00
iii		50mm dia	Nos	22.00	3,250.00	71,500.00
iv		40mm dia	Nos	12.00	3,175.00	38,100.00
v		32 mm dia	Nos	4.00	2,900.00	11,600.00
4.0		Providing and fixing in position Ball Valve set comprising one ball valve with strainer and one valve w/o strainer				
i		20mm dia	Set	73.00	3,000.00	219,000.00
ii		25 mm dia	Set	28.00	3,500.00	98,000.00
5.0		Self Dynamic balancing valves (for AHU's)				
		Supply, Installation, testing and commissioning of electronic, Self-balancing, Pressure independent type dynamic balancing Valve with integrated 2 way modulating Control valves in a single body. The valves accept 2-10V DC or 4-20 ma and shall be capable of providing 4-20 ma 2-10V DC flow feedback signal to the control system. Each valve should have 39 (for dia below 40mm & flow upto 22GPM) & 51 (for dia. above 25 mm size & flow more than 22 GPM) adjustable maximum flow rate setting to enable flow limitation and balancing to the coil or zones that the valves are controlling. All actuators shall be microprocessor based with a self-calibrating feature. The actuator shall be capable of accepting 2-10V DC, 4-20 ma electric signal. The valve actuator shall be equipped to provide actual flow feedback signal to the BMS/control system. The flow feedback provision shall be permanently available on the actuator. The minimum close off pressure of actuator must be 1.5 times shut off head of pump as per specifications of following sizes:				
i		25/32/40mm dia (upto 37 USGPM flow rate)	Nos	26.00	35,000.00	910,000.00
ii		50/65/80mm dia (upto 113 USGPM flow rate)	Nos	23.00	50,000.00	1,150,000.00
6.0		Temperature Control cum Automatic Balancing Valves: (for FCU's)				
		Supply, Installation, testing and commissioning of 15/20 mm dia, Self-balancing, Pressure independent type dynamic balancing Valve with integrated 2 way motorised actuator in a single body. The valves for using FCU's shall be ON/OFF temperature control type. Flow regulation shall be achieved through factory preset SS cartridge and shall be capable of controlling the flow with in $\pm 5\%$ of the rated flow. The flow limiting device shall be available as plug in device for inline valve housing. The flow limiting device/cartridge should be easily removable for any maintenance/cleaning purpose from the valve body without removing the valve from the piping circuit. The valve housing shall be made out of forged brass suitable for static pressure of 1600 kPaD and actuator shall be capable of withstanding 400 kPaD shut off pressure, ON/OFF type suitable for 230V AC, 50 Hz incoming Power Supply.				
i		15/20mm dia (upto 8 USGPM flow rate)	Nos	101.00	10,000.00	1,010,000.00
7.0		Providing and fixing in position Dial type Pressure gauge with gun metal gate valve, calibrated in metric & British units	Nos	62.00	900.00	55,800.00
8.0		Providing and fixing in position Mercury in glass thermometers with V groove for protection	Nos	62.00	350.00	21,700.00
9.0		Providing and fixing in position Auto air purging valves				

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i		15 mm dia	Nos	31.00	900.00	27,900.00
		INSULATION CHILLED WATER				
10.0		Piping insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
i		300 mm dia MS pipes	RM	60.00	2,750.00	165000.00
ii		200 mm dia MS pipes	RM	20.00	1,750.00	35000.00
iii		150 mm dia MS pipes	RM	20.00	1,750.00	35000.00
iv		125 mm dia MS pipes	RM	20.00	1,150.00	23000.00
v		100 mm dia MS pipes	RM	10.00	980.00	9800.00
vi		80 mm dia MS pipes	RM	65.00	800.00	52000.00
vii		65 mm dia MS pipes	RM	75.00	650.00	48750.00
viii		50mm dia MS pipes	RM	55.00	550.00	30250.00
ix		40mm dia MS pipes	RM	15.00	485.00	7275.00
x		32mm dia MS pipes	RM	50.00	450.00	22500.00
xi		25mm dia MS pipes	RM	150.00	410.00	61500.00
xii		20mm dia MS pipes	RM	20.00	400.00	8000.00
11.0		Butterfly Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
i		80 mm dia	Nos	8.00	845.00	6760.00
ii		65mm dia	Nos	20.00	725.00	14500.00
iii		50mm dia	Nos	14.00	590.00	8260.00
iv		40mm dia	Nos	2.00	530.00	1060.00
12.0		Ball valve insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
i		20mm dia	Set	4.00	445.00	1780.00
ii		25 mm dia	Set	11.00	445.00	4895.00
13.0		Self Dynamic balancing valves				
		Pressure independent type dynamic balancing Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
i		25/32/40mm dia (upto 37 USGPM flow rate)	Nos	1.00	500.00	500.00
ii		50/65/80mm dia (upto 113 USGPM flow rate)	Nos	21.00	800.00	16800.00
14.0		Y-stainer insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
i		80 mm dia pipe	Nos	4.00	845.00	3380.00
ii		65mm dia pipe	Nos	10.00	725.00	7250.00
iii		50mm dia pipe	Nos	7.00	590.00	4130.00
iv		40mm dia pipe	Nos	1.00	530.00	530.00
15.0		Providing and fixing in position Dial type Pressure gauge with gun metal gate valve, calibrated in metric & British units	Nos	44.00	900.00	39600.00
16.0		Providing and fixing in position Mercury in glass thermometers with V groove for protection	Nos	44.00	350.00	15400.00
17.0		Providing and fixing in position Auto air purging valves				
		15 mm dia	Nos	44.00	900.00	39600.00
18.0		Supply & insulation with Nitral rubber insulation of 32mm thick	Sq.mt	100.00	2,500.00	250,000.00
V		DUCTING:				
		Sheet Metal Duct:				

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Supplying, fabricating, installing and testing of factory fabricated sheet metal ducting complete as per SMACNA with splitter damper, duct damper, vanes etc. as per specifications and approved shop drawing complete as required.				
1.0		Air-conditioning Ducting :				
		Galvanized sheet steel				
i		26 SWG	SQMT	1900.00	550.00	1,045,000.00
ii		24 SWG	SQMT	2000.00	650.00	1,300,000.00
iii		22 SWG	SQMT	1800.00	750.00	1,350,000.00
iv		20 SWG	SQMT	1900.00	850.00	1,615,000.00
v		18 SWG	SQMT	250.00	1,000.00	250,000.00
2.0		Supplying, installing, and testing of GI volume control damper within ducts to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per approved shop drawings.	SQMT	10.00	5,500.00	55,000.00
3.0		Supply, installation & testing of AMCA certified & UL listed motorized smoke cum fire dampers of at least 90 minute fire rating and as per the specifications as detailed earlier in the relevant sections. The fire dampers shall be located in the supply/return air ducts/walls, at all fire rated crossovers (shaft/walls etc.).				
i		Actuator operated Smoke cum fire dampers (as per actual sizes from drawings)	SQMT	46.00	30,000.00	1,380,000.00
4.0		Supply Air Diffuser				
		Supplying, fixing and balancing of square supply air diffusers, air distribution grid for straightening the air flow through the collar and register and removable key-operated volume control dampers. Complete as per specification and drawing				
i		Powder Coated Aluminium square diffuser with volume control damper	SQMT	137.00	10,500.00	1,438,500.00
5.0		Return Air Diffuser				
		Supplying & fixing of square return air diffusers, air distribution grid for straightening the air flow through the collar and register without volume control dampers. Powder Coated Aluminium square diffuser without volume control damper	SQMT	125.00	4,500.00	562,500.00
6.0		Linear Grills:				
		Supplying, installing, testing and balancing of continous linear air grilles (Linear/single) of various sizes. Each grill shall have be with fixed horizontal front bar at 15 deg. deflection louvers, complete as per specification and drawing.				
i		Powder Coated Linear Aluminium grilles without volume control damper (for Common Area).	SQMT	24.00	4,000.00	96,000.00
7.0		Return Air Grills:				
		Supplying, installing, testing and balancing of return air grilles of various sizes. Each grill shall have be with fixed horizontal front bar at 15 deg. Deflection, complete as per specification and drawing.				
i		Powder Coated Aluminium grilles with volume control damper (for exhaust of toilets).	SQMT	32.00	15,000.00	480,000.00
8.0		Fresh Air Louvers:				
		Supplying, installing and balancing of fresh/exhaust air anodized aluminum intake louvers with bird screen & aluminum volume control damper, complete as per specification & drawings				
i		Fresh Air Louvers (With VCD & birdscreen)	SQMT	6.00	12,500.00	75,000.00
ii		Exhaust Air Louvers (Without VCD but with birdscreen)	SQMT	4.00	6,500.00	26,000.00
9.0		Air Measuring Stations				
		Supplying, installing and commissioning of air measuring stations in each AHU room for fresh air comprising factory built honeycomb air straightener, volume control damper with 230/24 Volts modulating actuator, air pressure pickups and factory calibrated controller	Nos	31.00	125,000.00	3,875,000.00

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
VI		INSULATION:				
1.0		Acoustic Lining of Ducts:				
		Supplying, & fixing of rigid fibre glass acoustic lining within supply air ducts as per the specifications. All ducts shown cross hatched on the approved shop drawings shall be provided with acoustic lining of fibre glass insulation as per the specifications.				
i		25mm thick acoustic lining.	SQMT	600.00	650.00	390,000.00
2.0		Supply, fixing & testing of Acoustic silencers in return air passage within AHU rooms capable of noise reduction by 10db				
i		22G GSS with 50/100mm thk acoustic lining in acoustic silencers	SQMT	38.00	1,000.00	38,000.00
3.0		Thermal Insulation:				
		Supplying, installing of external thermal insulation on ducts with approved sample of closed cell insulation class "O" rating, prelaminated with aluminium foil & density complete as per specifications.				
i		19mm thick insulation.	SQMT	7100.00	1,600.00	11,360,000.00
3.0		Roof Exposed Insulation:				
i		Supply, installation, testing and commissioning of 70 mm thick XPS Insulation having density of 32kg	SQMT	6325.00	1,200.00	7,590,000.00
VII		VENTILATION SYSTEM:				
1.0		Supply, installation, testing & commissioning of AMCA certified (for air & sound performance) and UL listed direct drive Tubeaxial supply air fan . Fans shall be suitable for installation in any position (Horizontal or Vertical). The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall strictly adhere to the attached Specifications.				
i		Axial flow fans for liftwell pressurization 6000cfm, 25mmSP, 2HP 415±10% volts 50Hz power supply	Nos	2.00	180,000.00	360,000.00
2.0		Supply, installation, testing & commissioning of AMCA certified (for air & sound performance) and UL listed belt drive SISW centrifugal backward inclined type fan with weather proof cabinet . The fans shall be complete with factory installed flow monitoring station (by fan manufacturer), and shall be a standard part of fan assembly. The motor shall be suitable for 415 V±10% volts three phase 50 cycle, AC supply. The fans shall strictly adhere to the attached Specifications.				
i		SISW centrifugal fans with weather proof cabinet for toilet exhaust 6400, 25mm SP, 2HP 415±10% volts 50Hz power supply	Nos	2.00	275,000.00	550,000.00
ii		SISW centrifugal fans with weather proof cabinet for toilet exhaust 4400, 25mm SP, 1.5HP 415±10% volts 50Hz power supply	Nos	2.00	225,000.00	450,000.00
3.0		Providing, installing, testing & commissioning following direct drive Axial/Mixed flow fans for ventilation & smoke extraction as per drawings. Fans for smoke management shall be AMCA certified (for air performance), UL listed & rated for 260°C for 4 hours operation. Motors shall be suitable for 415±10%volts, 50hz, 3phase power supply				
i		Mixed flow exhaust fan 30000CFM, 7.5 HP, 10mm SP of 4hrs fire rating at 260°C, 75db noise lvl at 1.5mts from fan, in normal mode for Entrance lobby ventilation	Nos	1.00	1,000,000.00	1,000,000.00
ii		Axial flow supply fan 15000CFM, 5HP, 25mm SP of 4hrs fire rating at 260°C, 75db noise lvl at 1.5mts from fan, in normal mode for Entrance lobby ventilation	Nos	2.00	500,000.00	1,000,000.00
iii		Axial flow exhaust fan 15000CFM, 1.5HP, 5mm SP of 4hrs fire rating at 260°C, 75db noise lvl at 1.5mts from fan, in normal mode for sitting lounge ventilation	Nos	2.00	350,000.00	700,000.00

Sr. No.		DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
iv		Axial flow supply fan 15000CFM,5HP, 25mm SP of 4hrs fire rating at 260°C, 75db noise lvl at 1.5mts from fan, in normal mode for sitting lounge ventilation	Nos	2.00	500,000.00	1,000,000.00
v		Mixed flow supply fan 36000CFM,15HP, 40mm SP of 4hrs fire rating at 260°C, 75db noise lvl at 1.5mts from fan, in fire & normal mode for corridor ventilation	Nos	4.00	1,200,000.00	4,800,000.00
vi		Axial flow exhaust fan 12000CFM, 1.5HP, 5mm SP of 4hrs fire rating at 260°C, 75db noise lvl at 1.5mts from fan, in fire & normal mode for corridor ventilation	Nos	16.00	350,000.00	5,600,000.00
		Total Carried to Summary				84439235.00

BILL OF QUANTITIES						
SECTION-F: SOLAR ENERGY						
Sr. No.	DSR 2012	Item Description	Unit	Qty	Unit Rate in Rs.	Amount in Rs.
A		Bill of Quantities				
1		Solar Panel 12V-125Wp	Nos.	224		
2		Module Mounting Structure	Nos.	224		
3		Battery Bank 120V-600Ah	Nos.	75		
4		Battery Protection Panel	Nos.	1		
5		PCU 120V DC ,Three Phase 40 KVA AC	Nos.	1		
6		D.C Distribution Board	Nos.	1		
7		AC Breaker Box with Auto Change Over and six numbers output	Nos.	1		
8		PV Aarray Junction Boxes	Lot	1		
9		Main Junction box	Nos.	1		
10		DC Cables set	Set	1		
11		Earthing	Set	1		
12		Lighting Arrestors	Set	1		
13		Accessories-Danger, Display boards etc	Lumpsum	1		
VI		Rating 28 KW (School C Block)	Set	1	6000000.00	6,000,000.00
		GRAND TOTAL				6,000,000.00

BILL OF QUANTITIES						
SECTION-G: FIRE DETECTION SYSTEM						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	QTY	UNIT	RATE	AMOUNT
		Non DSR				
I		FIRE DETECTION				
1		SITC of FIRE ALARM CONTROL PANEL : Microprocessor based 12 loop fire alarm control panel fully networkable, expandable with each loop capable of taking 127 devices expandable upto 15 loop, 8 line x 40 character alpha-numeric liquid crystal display. The panel shall be soft addressable type. The Panel should be able to store 10,000 log events in it's memory. The panel shall be able to give pin point location of all fire / fault conditions. Further, the panel must be able to automatically switch off respective control switches when ever any alarm is triggered. The panel shall have in built rectifier, Loop cards, LCD unit to indicate Fire / Fault Signal with address and analog output, option of built in printer to log all fire or fault events complete in all respects, integral SMF lead acid batteries with sealed cells of 24 V capable of running for a minimum of 8 hours with integral battery charger complete as required and as per specification VDS & CNBOP approved.	No.	1	525,000.00	525,000.00
2		SITC of REPEATER PANEL : With 2 line / 40 characters alpha numeric LCD display of FACP status information with commands such as reset and mute, complete as required.	No.	1	36,000.00	36,000.00
3		SITC of HEAT DETECTORS : Analogue, Soft Addressable, Intelligent heat detector with decentralized intelligence, automatic function self-test, CPU Failure mode, alarm and data memory, alarm indicator and with In-built Isolator, complete with base as required.	No.	520	3,000.00	1,560,000.00
4		Supply, Installation, Testing and Commissioning of MULTICRITERIA DETECTORS : Analog, Soft Addressable, Intelligent, Multicriteria detector with decentralized intelligence with integral optical detector and heat detector, Dual Optical with Forward and Backward scattering & One Thermal Chamber type and with In-built Isolator, complete with base as required.	Nos.	494.00	4,500.00	2,223,000.00
5		SITC of MANUAL CALL POINT : Analog, Soft Addressable, Manual Call Point with integrated Isolator, complete as required.	No.	32	3,300.00	105,600.00
6		SITC of RESPONSE INDICATORS : Local make response indicator complete as required.	No.	293	110.00	32,230.00
7		SITC of MONITOR MODULES : Addressable transponder / Monitor Modules complete as required.	No.	12	3,300.00	39,600.00
8		SITC of CONTROL MODULES : Addressable transponder / Control Modules complete as required.	No.	35	2,400.00	84,000.00
9		SITC of HOOTER CUM STROBES : Addressable Hooter cum Strobe complete as required.	No.	32	4,000.00	128,000.00
10		SITC of SIREN : Local make Addressable siren with high intensity having range of 1 km for out door application etc. complete as required.	No.	1	7,500.00	7,500.00
11		SITC of 6 W recessed ceiling mounted speakers with following features:- Built-in 100 / 70 V LMT, metal speaker with metal grill, SPL 1W/1m = 92dB, SPL@Full power = 97 dB, 180 deg dispersion, frequency range 120-17, 500 Hz as per BS 6840 complete with necessary mounting hardware & accessories.	No.	498	950.00	473,100.00
12		SITC of DSP Based Audio Controller System for Public Address & Voice evacuation with:- 8 zones, class AB wiring, 16 monitored speaker circuits, On-panel display & zone keys, 5 audio inputs, Integrated & monitored Fireman microphone, Digital message players up to 45 min for Automatic Voice Evacuation, Event log incident data records upto 2047 incidents, amplifier monitoring with switchover to back up amplifier. Compliance with EN 60849 , BS 5839 part 8 & EN 54-16 standards	No.	1	475,000.00	475,000.00
13		SITC of 480 watts RMS Class AB Audio Power Amplifier with following features: 480W RMS , amplifier output 100V/70V/4Ohm, Supply Input 230/240V 50 Hz, DC 24V, Short Circuit protection, Thermal Shutdown, Overload protection, Inbuilt Ventilating Fans, THD< 0.5%, AC Dc Fuses, SNR>80 Db	No.	6	90,000.00	540,000.00
14		Supplying and drawing Copper Conductor, MICA taped, Halogen Free of 2 x 1.5 sq.mm cable including all supports required for instalation as per requirement on surface including all end terminations complete in all respect for succesful commissioning for fire detection and PAVA system.	RM	6000	250.00	1,500,000.00
		TOTAL SUB HEAD LOW VOLTAGE				7729030.00