CHHATTISGARH MEDICAL SERVICES CORPORATION LIMITED

(Government of Chhattisgarh)

Tender

For

Construction of 100 bedded MCH wing at Bilaspur (C.G.), under National Rural Health Mission scheme

BOQ

VOLUME-V

June' 2013

HSCC (INDIA) LTD.
(CONSULTANTS & ENGINEERS FOR MEGA HOSPITALS & LABORATORIES)
E-6(A), sector-1, NOIDA(U.P) 201301 (India)

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Tender No. HSCC/NRHM/CG/2013(II)/03

GENERAL ABSTRACT

Name of Work: Construction of 100 bedded Hospital Chhattisgarh at Bilaspur (C.G)

S.No.	DESCRIPTION	Amount (in Rs)	Quoted % (Percent) below or above in figure	Quoted % (Percent) below or above in words	TOTAL AMOUNT (in Rs.)
1	**DSR -ITEMS**				
1.1	CIVIL WORK	82,170,847.73			
1.2	PLUMBING WORK	4,456,106.00			
1.3	FIRE FIGHTING WORK	79,042.60			
2	**Non DSR Items**				
2.1	CIVIL work	2,550,500.00			
2.2	PLUMBING WORK	6,028,971.00			
2.3	FIRE FIGHTING WORK	1,753,846.00			
2.4	ELECTRICAL WORK	13,997,064.00			
2.5	HVAC WORK	3,908,802.00			
2.6	OPERATION THEATER	5,001,700.00			
	Grand Total	**119,946,879.33**			

Sign & Seel

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

ABSTRACT OF COST(Civil Work)

S.No	DESCRIPTION OF WORK		DSR AMOUNT	MARKET RATE AMOUNT
1	EARTHWORK		1,698,115.61	0.00
2	CONCRTE WORK		2,308,203.41	0.00
3	RCC WORK		40,494,382.79	0.00
4	BRICK WORK		7,396,792.60	0.00
5	DOORS & WINDOWS		4,718,262.64	0.00
6	STEEL WORK		1,965,117.50	0.00
7	FLOORING		6,697,019.66	44,400.00
8	CEILING & ROOFING		3,750,430.60	1,467,000.00
9	FINISHING		5,949,496.35	615,350.00
10	MISCELLANEOUS		6,204,185.98	423,750.00
11	ROAD WORK AND DEVELOPMENT		988,840.60	0.00
12	DISMANTLING			
	TOTAL		**82,170,847.73**	**2,550,500.00**

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1.00	**EARTH WORK**						
1.01	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 up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.						
a)	All kinds of soil	2486.00	cum	129.35		321564.10	
b)	Ordinary rock	829.00	cum	197.75		163934.75	
c)	Hard rock (blasting prohibited)	829.00	cum	490.10		406292.90	
1.02	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift 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.						
a)	All kinds of soil.	55.00	cum	130.80		7194.00	
1.03	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.	4782.00	cum	83.80		400731.60	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1.04	Extra for every additional lift of 1.5 m or part there of in excavation/banking excavated or stacked materials.						
a)	All kinds of soil.						
i)	1.5 to 3.0m	1225.38	cum	34.60		42398.08	
1.05	Supplying and filling in plinth with jamuna sand under floors including, watering. ramming consolidating and dressing complete.	367.00	cum	749.30		274993.10	
1.06	Extra for disposal of excavated earth for additional lead beyond 50m or part thereof upto 9 such additional leads						
a)	All kinds of soil	4782.00	cum	16.94		81007.08	
	Total					**1698115.61**	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
2.00	**Concrete Work**						
2.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:						
a)	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	5.00	cum	4514.05		22570.25	
b)	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	211.00	cum	3593.30		758186.30	
c)	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	379.00	cum	3357.40		1272454.60	
2.02	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:						
a)	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	12.00	cum	5272.40		63268.80	
2.03	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).	269.00	sqm	207.55		55830.95	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
2.04	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer specification .	70.00	per 50 kg cement	35.35		2474.50	
2.05	Applying a coat of residual petroleum bitumen of grade of VG-10 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.	269.00	sqm	96.65		25998.85	
2.06	Providing and laying in position cement concrete 1:5:10 (1 Cement : 5 fine sand : 10 broken brick bats 40 mm nominal size) including consolidation etc all complete.	43.00	Cum	2498.12		107419.16	
	Total					**2308203.41**	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
3.00	**REINFORCED CEMENT CONCRETE**						
3.01	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).						
a)	All works upto plinth level	769.90	cum	5242.15		4035907.53	
b)	All work above plinth level upto floor V level	1367.87	cum	5781.50		7908351.02	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
3.02	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 :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). Fly ash coforming to grade 1 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 clause 5.2 and 5.2.1 of IS:456-2000 in the items of BMC and RMC.						
a)	All works upto plinth level	65.32	cum	5519.40		360536.69	
b)	All work above plinth level upto floor V level	152.43	cum	6059.20		923605.09	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
3.03	Add or deduct for providing richer or leaner mixes respectively at all floor levels.						
a)	Providing M-30 grade concrete instead of M-25 grade BMC/ RMC. (Note:- Cement content considered in M-30 is @ 340 kg/cum)	80.00	cum	63.20		5056.00	
3.04	Centering and shuttering including strutting, propping etc. and removal of form for:						
a)	Foundations, footings, bases of columns, etc. for mass concrete.	848.00	sqm	166.90		141531.20	
b)	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	516.00	sqm	285.15		147137.40	
c)	Suspended floors, roofs, landings, balconies and access platform.	5496.00	sqm	311.20		1710355.20	
d)	Shelves (Cast in situ)	75.00	sqm	311.20		23340.00	
e)	lintels, beams, plinth beams. girders. bressumers and cantilevers.	5481.00	sqm	262.25		1437392.25	
f)	Columns, Pillars, Piers, Abutments, Posts and Struts.	2452.00	sqm	365.60		896451.20	
g)	Stairs, (excluding landings) except spiral-staircases	101.00	sqm	326.30		32956.30	
j)	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.	28.00	sqm	166.90		4673.20	
k)	Extra for shuttering in circular work for						
i)	columns	5.00	Sqm	62.24		311.20	
ii)	Beams	5.00	sqm	57.03		285.15	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
l)	Weather shade, Chajjas, corbels etc., including edges	80.00	sqm	411.10		32888.00	
3.05	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)						
a)	Suspended floors, *roofs,* landings, beams and balconies (Plan area to be measured).	638.00	sqm	121.65		77612.70	
3.06	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits.						
a)	40 mm thick	28.00	sqm	523.80		14666.40	
3.07	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.						

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
a)	Thermo-Mechanically Treated bars						
i)	At all levels	350231.00	Kg	62.25		21801879.75	
3.08	Add for using extra cement in the items of design mix over and above the specified cement content therein.	80.00	Qtl	589.80		47184.00	

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Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
3.09	Providing and fixing of expansion joint system related with floor location as per drawing and direction of Engineer -IN -Charge.The joints system will be of extruded aluminum base member,self aligning /self centering arrangement and support plates etc.asper ASTMB221-02. The system shall be such that it provides floor to floor /floor to wall expansion control System for varoius vertical localtion in load application area that accommodates multi directional seismic movement without stress to it's components.system shall consist of metal profiles with a universal aluminum base member designed to accommodate various project condition and finish floor treatments.The cover plate shall be designed of width and thickness required to satisfy projects movement and loading requirements and secured to base members by utilizing manufacture's pre-engineered self-centering arrangament that freely rotates/moves in all direction .						

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	The Self-centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all direction including vertical displacement.Provision of Moisture Barries Membrane in the joint system to have watertight joint is mandatory requriement all as per manufactures design and as approved by Enginner-in-Charge.(Material shall confirm to ASTM 6063.)						
a)	Floor joint of 100 mm gap	30.00	metre	6374.3		191229.00	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
3.10	Providing and fixing of expansion joint system related with wall joint (internal/external) location as per darwings and direction of Engineer -In-Charge. The joints shall be extruded aluminum base member ,self aligning /centering arrangement and support plate as per ASTM B221-02. The material shall be such that it provides an Expansion joints System suitable for vertical wall to wall/wall to corner application ,both new and existing construction in office building & complexes with no slipping down tendency amongst the components of joint System. The joint System shall utilize light weight aluminum profiles exhibiting minimal exposed aluminum surfaces mechanically snap locking the multicellular to facilitate movement.(Material shall confirm to ASTM 6063.)						
a)	Wall joint of 100 mm gap	50.00	metre	5096.65		254832.50	

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Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
3.11	Providing and fixing of expansion joint system of approved make and manufactures for various roof loction as per approved drawings and direction of Engineer -In -Charge. The joints shall be extruded aluminum base member with ,self aligning and self centering rreangment support plates as per ASTM B221-02. The system shall be such that it provides watertight roof/roof to corner joint cover expansion control system that is capable of accommodating multidirectional seismic movement without stress to its components.System shall consist of metal profile that incorporates a universal aluminum base member designed to accommodate various project conditions and roof treatment. The cover plate shall be designed of width and thickness required to satisfy movements and loading reqirements and secured to base members by utilizing manufacturer's pre-engineered self centering arrangment that freely rotates/moves in all directions						

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Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	The self centering arrangement shall exhibit circular sphere ends lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all direction including vertical displacement.The joint System shall resists damage ior deteroration from the impact of falling ice, exposure to UV, airborne contaminants and occasional foot traffic from maintenance personnel.Provision of Moisture Barrier Membrane in the joint System to have water tight joint is mandatory requirement Material shall confirm to ASTM 6063.						
a)	Roof joint of 100 mm gap	70.00	metre	6374.3		446201.00	
	Total					**40494382.79**	

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Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
4.00	**BRICK WORK**						
4.01	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:						
a)	Cement mortar 1:6 (1 cement: 6 coarse sand)	328.00	cum	3316.55		1087828.40	
4.02	Brick work with non modular fly ash lime bricks (FALG Bricks) conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in						
a)	Cement mortar 1:6 (1 cement: 6 coarse sand)	1368.00	cum	3978.50		5442588.00	
4.03	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :						
a)	cement mortar 1:4 (1 cement: 4 coarse sand)	20.00	sqm	416.95		8339.00	
4.04	Half brick masonry with non modular fly ash lime Gypsum bricks (FALG bricks) of class designation 10, conforming to IS : 12894, in super structure above plinth and upto floor V level						
a)	Cement mortar 1:4 (1 cement :4 coarse sand)	1495.00	sqm	503.1		752134.50	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
4.05	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).	1515.00	sqm	63.30		95899.50	
4.06	Brick edging 7cm wide 11.4 cm deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	384.00	Metre	26.05		10003.20	
	Total					**7396792.60**	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.00	**DOORS, WINDOWS AND FITTINGS**						
5.01	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) :						
a)	For fixed portion						
i)	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	3474.00	kg	394.90		1371882.60	
b)	For shutters of doors, windows & ventilators including providing and fixing hinges/pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).						

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
i)	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	1477.00	kg	443.80		655492.60	
5.02	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators a with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with dash fastener of required dia and size(Dash fastener to be paid for separately).	382.00	kg	332.30		126938.60	
5.03	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:						
a)	Profile C						

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i)	Fixing with adjustable lugs with split end tail to each jamb	20.40	metre	363.10		7407.24	
5.04	Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.						
a)	Pre-laminated particle board with decorative lamination on both sides.	8.00	Sqm	969.95		7759.60	
5.05	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) :						
a)	With float glass panes of 5.50 mm thickness	201.00	sqm	905.75		182055.75	

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5.06	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete	15.00	sqm	3328.40		49926.00	
5.07	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.						
a)	With brass cover plate minimum 1.25 mm thickness	11.00	each	2127.30		23400.30	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.08	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	1046.00	kg	388.40		406266.40	
5.09	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 :						
a)	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	361.00	sqm	1578.30		569766.30	
5.10	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured).	361.00	sqm	325.20		117397.20	

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Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.11	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :						
a)	Rectangular or square.	177.00	sqm	127.75		22611.75	
5.12	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	10.00	sqm	5.80		58.00	
5.13	Providing glass panes, with wooden fillets wherever necessary.						
a)	Float glass panes of thickness 4 mm	10.00	Sqm	724.65		7246.50	
5.14	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality						
a)	1.0 mm thick.	712.00	sqm	596.30		424565.60	

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Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.15	Providing and fixing fly proof stainless steel grade 304 wire gauge, to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.50 mm all complete.						
a)	With aluminium beading	165.00	sqm	1160.30		191449.50	
5.16	Providing and fixing fire resistant door frame of section 143 x 57 mm having built in rebate made out of 16 SWG G.I. sheet (zinc coating not less than 120 gm/sqm) duly filled with vermuculite based concrete mix,suitable for mounting 60 minutes fire rated door shutters. The frame is fitted with intumuscent fire seal strip of size 10x4 mm (minimum) alround the frame and fixing with dash fastener of approved size and make,including applying a coat of approved brand fire resistant primer etc complete as per direction of Engineer-in-charge (Dash fastener to be complete as per direction of Engineer-in-charge (Dash fastener to be paid for separately).	13.00	meter	1161.45		15098.85	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.17	Providing and fixing 50 mm thick glazed fire resistant door shutters of 60 minutes fire rating conforming to IS:3614 (Part-II), tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, lock rail, top rail 100 mm wide, bottom rail 200 mm wide, made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/m2) duly filled FR insulation material and fixing with necessary stainless steel ball bearing hinges of approved make, including applying a coat of approved fire resistant primer etc. all complete as per direction of Engineer-in-charge (panneling to be paid for separately).	7.00	sqm	5727.20		40090.40	
5.18	Providing and fixing glazing in fire resistant door shutters, fixed panels, ventilators and partitions etc., with G.I. beading of appropriate size, made out of 20 SWG G.I.sheet (zinc coating not less than 120 gm/m2), fire resistant sealant, including applying a coat of approved fire resistant primer on G.I. beading etc., complete all as per direction of Engineer-in-charge.						
a)	1 With clear fire resistant glass panes 6mm thick of approved brand, having minimum 60 minutes fire resistance	1.00	sqm	25435.15		25435.15	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.19	Providing and fixing panic bar / latch (Double point) fitted with a single body, Trim Latch & Lock on back side of the Panic Latch of reputed brand and manufacture to be approved by the Engineer-in- charge, all complete.	2.00	Each	5873.25		11746.50	
5.20	Providing and fixing Aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI:3564, embossed on the body,door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.3	154.00	each	662.80		102071.20	
5.21	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete:						
a)	300x16 mm	12.00	each	203.80		2445.60	
b)	250x16 mm	7.00	each	168.95		1182.65	
5.22	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:						
a)	250x10 mm	207.00	each	86.45		17895.15	
b)	150x10 mm	515.00	each	59.00		30385.00	

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
5.23	Providing and fixing aluminium pull bolt lock anodised ISI marked (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws bolts, nut and washers etc. complete.	15.00	each	62.45		936.75	
5.24	Providing and fixing 50cm long aluminium kicking plate 100x3.15 mm anodised (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour or shade with necessary screws etc. complete.	15.00	each	155.35		2330.25	
5.25	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade wilh necessary screws etc. complete :						
a)	125 mm	406.00	each	62.50		25375.00	
b)	100 mm	25.00	each	49.55		1238.75	
5.26	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.						
a)	Twin rubber stopper	204.00	each	71.55		14596.20	

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Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
5.27	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles of approved quality with necessary screws etc. complete.	153.00	each	706.15		108040.95	
5.28	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.						
a)	255 X 19 mm	295.00	each	229.80		67791.00	
5.29	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.						
a)	Powder coated minimum thickness 50 micron aluminium tubular handle bar.	4.00	each	544.40		2177.60	
5.30	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	2.00	each	356.10		712.20	

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Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
5.31	Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.						
a)	Powder coated minimum thickness 50 micron aluminium.	309.00	each	51.70		15975.30	
5.32	Providing and fixing aluminium round shape handle of outer dia 100mm with SS screws etc. complete as per direction of Engineer-in-charge						
a)	Powder coated minimum thickness 50 micron aluminium	4.00	each	66.80		267.20	
5.33	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						
a)	80x1.25mm M.S. laths with 1.25 mm thick top cover.	32.00	Sqm	1840.85		58907.20	
5.34	Providing and fixing ball bearing for rolling shutters.	12.00	each	429.85		5158.20	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
5.35	Extra for providing grilled rolling shutters manufactured out of 8 mm dia. M.S. bar instead of laths as per design approved by Engineer-in-charge.(area of grill to be measured).	16.00	Sqm	261.35		4181.60	
	Total					**4718262.64**	

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				BOQ for Civil Work			
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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
6.00	**Steel Works**						
6.01	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 cost with approved steel primer all complete.						
a)	Fixed to steel windows by welding.	200.00	kg	90.75		18150.00	
6.02	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.						
a)	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	9780.00	Kg	77.90		761862.00	
6.03	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railng and staircase railing including applying a priming coat of approved steel primer.						
a)	M.S. tube.	70.00	Kg	86.45		6051.50	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
6.04	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.).	2113.00	kg	558.00		1179054.00	
	Total					**1965117.50**	

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Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.00	**Flooring**						
7.01	Cement concrete flooring 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate) finised with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.						
a)	40mm thick with 20mm nominal size stone aggregate.	9.00	sqm	280.05		2520.45	
7.02	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.						
a)	18 mm thick.	5.00	sqm	258.20		1291.00	
7.03	Providing and fixing glass strips in joints of *terrazo/* cement concrete floors.						
a)	40 mm wide and 4 mm thick.	80.00	Metre	29.40		2352.00	
7.04	Marble stone flooring/skirting with 18mm 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:						
a)	Raj Nagar Plain	50.00	sqm	1265.35		63267.50	
b)	Udaipur green/Jaisalmer marble	149.00	sqm	1418.95		211423.55	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.05	18mm thick Prepolished Granite (Base Rate 150/- Sqft) in Risers, skirting and dado/wall cladding over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement including pointing with white cement mixed with pigment matching the shade of granite stone all complete and as directed.	74.00	sqm	4015.95		297180.30	
7.06	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) :						
a)	25 mm thick.	833.00	sqm	945.70		787768.10	
7.07	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.	51.00	sqm	954.10		48659.10	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.08	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.	1327.00	sqm	724.25		961079.75	
7.09	Providing and laying rectified Glazed Ceramic floor tiles 300x300 mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigments etc., complete.	376.00	sqm	961.25		361430.00	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.10	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						
a)	Size of Tile 600x600 mm	1292.00	sqm	1337.10		1727533.20	
7.11	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.						
a)	Size of Tile 600x600 mm	136.00	sqm	1339.20		182131.20	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.12	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, vanity counters, window 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, induding rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels						
a)	Granite of any colour and shade						
i)	Area of slab upto 0.50 sqm	10.00	sqm	3041.15		30411.50	
ii)	Area of slab over 0.50 sqm.	66.00	sqm	3083.40		203504.40	
7.13	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-						
a)	Granite work.	102.00	metre	178.75		18232.50	
7.14	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive including cleaning etc. complete.	202.00	metre	185.80		37531.60	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.15	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.	18.00	Nos	281.10		5059.80	
7.16	Providing and laying 3mm thick chemical resistant monolithic resinous (epoxy) flooring and coving/ skirting of required colour into two or more coats by non slippery, anti-fungal, anti bacteria, scratch proof protective finish over concrete substrate including preparing surface by mechanical means captive shot blasting/ grinding etc as required complete to the satisfaction of engineer. The concrete floor must be checked for moisture content using thermo Hygrometer and should have moisture content less than 5% and no rising dampness in floor, for which nothing extra is payable.	37.00	Sqm		1200		44400.00
7.17	Chequered terrazo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete on 20 mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :						

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
a)	Medium shade using 50%white cement 50% ordinary cement	105.00	sqm	773.40		81207.00	
7.19	Granite stone/ Engineering Stone flooring with 18 mm thick stone, rectangular shape, (minimum size of stone should be 0.45 sqm and one dimension not less than 700 mm) as per drawing or as per the pattern as approved by the client/ architect/ engineer, over 20 mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry mixed with pigment to match the shade of stone including rubbing and polishing complete.						
a)	Granite stone of approved quality (Base rate Rs 150 per Sft)	43.00	Sqm	2725.47		117195.21	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
7.21	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 31 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) and top layer 9 mm thick with ready mix material of approved manufacture having white, black, chocolate, grey, yellow or green marble chips of sizes from 4 mm to 7 mm nominal size, laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder : 7 marble chips) by volume, including cement slurry etc. complete.						
	Medium shade pigment with 50% white cement and 50% ordinary cement	2734.00	sqm	504.30		1378756.20	
7.22	Marble chips skirting up to 30 cm height, rubbed and polished to granolithic finish, top layer 6 mm thick with ready mix material of approved manufacture having white, black, chocolate, grey, yellow or green marble chips of sizes from smallest to 4 mm nominal size, laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume :						
	Medium shade pigment with 50% white cement and 50%ordinary cement	287.00	sqm	621.90		178485.30	
	Total					**6697019.66**	**44400.00**

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
8.00	**CEILING & ROOFING**						
8.01	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and						

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	30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures 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 drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with :						
a)	12.5 mm thick tapered edge gypsum board conforming to IS: 2095- Part I.	767.00	sqm	691.40		530303.80	

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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
8.02	Providing and fixing 8mm thick clear multi wall polycarbonate sheets of approved quality and shade in desired shape in roofing including the cost of EPDM gaskets , sealing tape , aluminium profile and all necessary accessories complete as per architectural drawings and as directed by Engineer incharge. The item includes designing the complete system and supplying & getting approved from client and / or reputed engineering institue like IIT etc. The detailed shop drawings including supplying structural design calculations based on relevent codal provisions and carrying out water penetration test as per standards followed in India.						
a)	The whole work is to be done through reputed and approved vendor having experience in polycarbonate work in Commercial/ Govt/ Corporate buildings as per architectural elevation drawings including filling of joints with silicon sealent and also with masonary/ RCC work, at all heights including double heights, straight or curved etc. complete in all respect. (Plan Area shall be measured for the payment) (M.S. Framing to be paid for seprately)	489.00	Sqm		3000.00		1467000.00
8.03	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of :						

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
i)	v) Ist course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.						
ii)	vi) IInd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.						
iii)	vii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area.						
iv)	viii) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)	215.00	sqm	399.60		85914.00	

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
8.04	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 to IS : 2645 and approved by Engineer - in - charge to required slope and treating similarly the						

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	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 *2.75kgl* sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement: 4 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :						
a)	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	3984.00	sqm	786.70		3134212.80	
	Total					**3750430.60**	**1467000.00**

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
9.00	**Finishing**						
9.01	12 mm cement plaster of mix:						
a)	1:6 (1 cement: 6 fine sand)	5894.00	sqm	112.50		663075.00	
9.02	15 mm cement plaster on the rough side of single or half brick wall of mix:						
a)	1:6 (1 cement: 6 fine sand)	7192.00	sqm	130.20		936398.40	
9.03	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) finished with a top layer 6mm thick cement plaster 1:6 (1 cement: 6 fine sand).	4231.00	sqm	182.90		773849.90	
9.04	6 mm cement plaster of mix:						
a)	1:3 (1 cement: 3 fine sand)	5002.00	sqm	101.00		505202.00	
9.05	Neat cement punning	60.00	sqm	31.10		1866.00	
9.06	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	93.00	sqm	28.85		2683.05	
9.07	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	40.00	Sqm	83.80		3352.00	
9.08	White washing with lime to give an even shade:						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
a)	New work (three or more coats)	40.00	sqm	11.75		470.00	
9.09	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade						
a)	New work (two or more coats) over and including priming coat with cement primer.	600.00	sqm	64.65		38790.00	
9.10	Finishing walls with Acrylic Smooth exterior paint of required shade:						
a)	New work (Two or more coat applied @ 1.67 *Itr/10* sqm over and including base coat of water proofing cement paint applied @ 2.20 kgl10 sqm).	517.00	sqm	67.50		34897.50	
9.11	Applying one coat of cement primer of approved brand and manufacture on wall surface:						
a)	Cement primer.	40.00	sqm	25.55		1022.00	
9.12	Finishing walls with textured exterior paint of required shade:						
a)	New work (Two or more coats applied @ 3.28 Itr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/1 0 sqm.	3991.00	sqm	117.70		469740.70	
9.13	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
a)	Two or more coats on new work	40.00	sqm	60.25		2410.00	
9.14	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:						
a)	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	51.00	sqm	78.80		4018.80	
9.15	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.	17401.00	sqm	76.05		1323346.05	
9.16	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.						
a)	Two coats	6961.00	sqm	34.40		239458.40	
9.17	Wall painting with premium acrylic emulsion paint of interior grade, 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.						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
a)	Two coats	8701.00	sqm	61.45		534676.45	
9.18	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.						
a)	Two coats	180.00	sqm	53.90		9702.00	
9.19	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.						
a)	With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 250 grams/ litre	180.00	sqm	24.30		4374.00	
b)	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	15662.00	sqm	25.55		400164.10	
9.20	Providing and fixing 24 gauge and 18mm mesh size chicken wiremesh at junction of concrete and brick work and other locations at all heights including cutting to required size and side laps of minimum 75mm and fixing in positions with nails/screws etc. as directed and as required at site.	80.00	sqm		75.00		6000.00

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
9.21	Applying chemical resistant epoxy resin wall coating over plasetered surface including preparing of the surface, applying acrylic primer, putty and painting of approved brand and manufacture.						
a)	New work (three or more coats) over and including priming coat with acrylic primer and putty.	1741.00	sqm		350.00		609350.00
	Total					**5949496.35**	**615350.00**

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
10.00	**Miscellaneous**						
10.01	Providing and fixing dry cladding upto 10 metre heights with 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.)						
a)	Gwalior Sand Stone(base rate Rs.90 per sqft)	1169.00	sqm	2946.70		3444692.30	

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
10.02	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 centring 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 Engineerin- 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).						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
	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).	3507.00	Kg	119.00		417333.00	
10.03	providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings, the aluminium quality as per grade 6063 T5 or T6 as per BS 1474, including super durable powder coating of 60-80 microns conforming to AAMA2604 of required colour and shade as approved by the Engineer-in-charge.						
	(The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account).	994.50	kg	363.85		361848.83	
10.04	Designing, fabricating, testing, protection, installing and fixing in position semi(grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels including.						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
	structural analysis, design and preparation of shop drawings for the specified design loads confirming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminium sections for fixing glazing panales of various thickness, aluminium cleats, sleeves and splice plates etc. gaskets, screws, taggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including.						
	Fabricating and supplying serrated M.S. hot dip galvanished / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 dimentional movement for achieving perfect vertically and proper fixing of structural glazing system with the RCC / masonary / structural steel frame work of building structure, using stainless steel anchor fasteners / bolts, nylon seperator to prevent bimetallic contacts with nuts and washes etc. of stainless steel grade 316, of the required capacity and in required numbers.						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
	Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment, including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacturer, as per the approved sealant design, within and all around the perimeter for holding glass.						
	Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.						
	Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete.						

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc. enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design checked and all the shop drawings vetted by the Principals of the structural glazing system.						
	The item also includes the cost of all mock ups at site, cost of all samples of the indivisual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-charge.	153.00	Sqm	2282.65		349245.45	
	Note :- 1						

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				BOQ for Civil Work			
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1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	The cost of providing extruded aluminium frames, shadow boxes, fire stop (barrier)-cum-smoke seals, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for seperately under revelent items under this sub-head. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves) on the external face shall be mesured in sqm. up to two decimal places.						
	Note :- 2						
	The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 sqm. from the certified laboratories accereditated by NABL (National Accredetation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work.						
	Performance Testing of structural glazing system						
	Tests to be conducted in the NABL certified laboratories						

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Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
	Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr"						
	Static Water penetration Test (50pa to 1500pa) as per ASTME-331-09 testing method for a range up to 2000 ml."						
	Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01-05 testing method for a range up to 2000 ml."						
	Structural Performance Deflection and deformation by static air pressure test (1.5 times design wind pressure without any failure) as per ASTME-330-10 testing method for a range up to 50 mm."						
	Seismic Movement Test (up to 30 mm) as per AAMA 501. 4-09 testing method for Qualitative test."						
	Tests to be conducted on site						
	Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) up to 2000ml."						

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
10.05	Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12-6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer high performance heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor. (Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.1) For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm.						

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
	(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc.	153.00	sqm.	3862.85		591016.05	
10.06	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineerin- Charge. sqm	40.00	sqm.	2966.80		118672.00	

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
10.07	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.	2338.00	each	171.20		400265.60	
10.08	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 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	314.00	sqm	338.75		106367.50	

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				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
10.09	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) Ist 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 cudm/sqm thoroughly embedded in the 2nd layer.						
a)	Using rough kota stone.	415.00	Sqm	732.85		304132.75	

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
10.10	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :						
a)	Using rough Kota stone	125.00	Sqm	884.90		110612.50	
10.11	Providing fabricating and fixing of signages of varying sizes and shapes using three mm thick PVC sheet at base with self addhesive coloured vinyl with graphicson top of glow tape complete including fixing on wall with screws and washers or hanging on ceiling with GI chain/GI Bar complete as per technical specifications and directions of Engineer.	5000.00	Sqinch		4.00		20000.00

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Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
10.12	Providing and fixing of sinages of varying sizes and shapes using stainless steel sheet of minimum 16G thickness brush finish including engraving/etching of letters of required size filled with colour as desired by engineer,fixing with ss screws on walls						
		1000.00	Sqinch		17.00		17000.00
10.13	Providing. Fabricating and fixing of Aluminium Composite Panel Signages with 3mm thick ACP Sheet, using 25X25 mm MS pipe Frame of approved qualiy with anti rust coating, back with G.I. and 5 Sides with ACP Sheet (alucobond or equivalent approved make), lettering to be done with 5mm Acrylic Sheet and Vinyl's(if Needed), backlit with (Philips or approved equivalent) Slim Lite Tube light Fittings, Acrylic Letters to Protrude out and be lit, together with a timer for switching on and off automatically at night and day including transportation and fixing at site as per the direction of the site engineer.						
		25.00	Sft		1050.00		26250.00
10.14	Providing & Fixing Wall Mounted Nonlit Internal sign of approved make & made of 10mm Acrylic with the required text matters stuck on it with plotted self adhesive vinyl & Mounted on 3mm Aluminium Composit Panel bracketed at suitable locations including necessary fittings & fastening etc. complete & as directed by The Engineer in charge.						
		2000.00	sqrinch		9.00		18000.00

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Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
10.15	Providing and fixing of external sinages of varying sizes and shapes using GI sheet of atleast 22 G / aluminium sheet of suitable gauge complete as per technical specifications and directions of Engineer.	100.00	sqft		350.00		35000.00
10.16	Providing and fixing MS support frame for external signages made of structural steel including welding, primering, painting foundation with 1:1.5:3 cement concrete complete as per drawing, technical specifications and directions of engineer.	500.00	Kg		135.00		67500.00
10.17	Providing the following brand new vehicle at any time for exclusive use of engineer during currency of contract.The number of vehicles and period shall be informed by the engineer as per requirement.The rate are inclusive of service of drivers, fuel, oil,						
a)	Indica or equivalent as required	24000.00	Km		10.00		240000.00
	Total					**6204185.98**	**423750.00**

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				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
11.00	**ROAD WORK AND DEVELOPEMENT**						
11.01	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	1000.00	SQM	61.25		61250.00	
11.02	Providing and laying C.C. pavement of mix M25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately).	40.00	Cum	5761.60		230464.00	
11.03	Providing and laying in position bitumen hot sealing compound for expansion joints etc						

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
a)	Using grade 'A' sealing compound.	15000.00	per m length	1.65		24750.00	
11.04	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	500.00	sqm	536.65		268325.00	

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
11.05	Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in- charge.	80.00	cum	2899.25		231940.00	
11.06	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement in position to the required line, level and curvature jointed with cement mortar 1:3 (1 cement: 3 coarse sand) including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	27.00	Cum	5046.80		136263.60	

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

				BOQ for Civil Work			
Item No	Description Of Item	Total Qty	Unit	DSR 12 Rate	NS Item Rate	Amount DSR	Amount NS Items
1	2	3	4	5	6	7	8
11.07	Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing of by spreading and neatly levelling with in a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure).	240.00	Cum	30.90		7416.00	
11.08	Supplying and stacking of well decayed cow dung manure at site including royalty and carriage upto 1 km (Cow dung manure measured in stacks will reduced by 8% for Payment).	80.00	Cum	215.15		17212.00	
11.09	Rough dressing the trenched ground including breaking clods & Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	800.00	Sqm	2.54		2032.00	
11.10	Spreading of sludge, dump manure or/and good earth in required thickness as per direction of office-in charge (Cost of sludge, dump manure or/ and good earth to be paid separately).	80.00	Cum	21.00		1680.00	
11.11	Fine dressing of the ground	800.00	Sqm	1.46		1168.00	

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
11.12	Grassing with selection No.1 grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the good earth shall be paid for separately).						
a)	With grass Turf	800.00	Sqm.	5.28		4224.00	
11.13	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately):						
a)	Holes 1.2 m dia and 1.2 m deep.	10.00	Each	186.90		1869.00	
b)	Holes 60 cm dia, and 60 cm deep.	10.00	Each	24.70		247.00	
	Sub Total					**988840.60**	

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
12.00	**DISMANTLING**						
12.01	Dismantling of existing buildings and other structures/ Roads, footpaths etc coming in plot of construction comprising of concrete, RCC, brick work, flooring, finishes ,pavement, external services etc.including taking out all doors, windows and ventilators,roofing, electrical,water supply, sanitary installations, rain water pipe with all fittings and fixtures etc. complete . The job also include all excavations, fillings, levelling and stacking of all servicable material at desired location and including the cost of transportation and disposal of all the unservicable materials to the nearest municipal dumping ground complete . The entire site of dismantled buildings/ structures shall be cleared and levelled as directed. Approx. covered area of buildings at all floors to be dismantled is mentioned in the enclosed drawing.						
	All servicable and unserviceable material shall be the property of the bidder except all inventories like electrical fittings, fans, airconditioners, furniture, and other loose articles belonging to the owner which shall be deposited by the bidder to the owner's store at no extra cost.						

Project Name: Construction of RMNCH 100 Bedded Hospital Chattisgarh

				BOQ for Civil Work			
Item No	**Description Of Item**	**Total Qty**	**Unit**	**DSR 12 Rate**	**NS Item Rate**	**Amount DSR**	**Amount NS Items**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	An indicative drawing is enclosed here with for the convenience of bidders, However the bidders may actually verify the detail from the site. No claim on this shall be entertained.						
	All malba and unserviceable materials obtained as a result of dismantling/demolition shall be disposed off by the bidder outside the premises to the nearest municipal dumping ground or at the bidder;s place, for which nothing extra is payable.						
	The bidder has to quote the credit/ debit rate for demolition and disposal by sale, the rate should include all costs involved in dismantling/ demolition of the existing structures as shown in the enclosed drawing, disposal of unserviceable materials, cost of serviceable materials, clearing of site and taking all precautions so as not to harm the adjacent buildings and mankind in the premises.(credit rate should have minus (-) sign with it.)		Job				
	Total						

ABSTRACT

Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM

S.No.	DESCRIPTION	DSR-2012 Amount (Rs)	Market Amount(Rs)
A	**PLUMBING WORK**		
1.00	SANITARY FIXTURES	378,895.50	491,100.00
2. 00	SOIL, WASTE AND VENT PIPES	1,353,304.55	431,924.00
3.00	WATER SUPPLY	874,031.05	930,798.60
4.00	SEWERAGE AND DRAINAGE	688,889.58	745,000.00
5.00	EARTH WORK	73,687.20	
6.00	EXTERNAL WATER SUPPLY	626,787.24	309,300.00
7.00	RAIN WATER PIPING	340,083.25	359,242.00
8.00	BOREWELL	0.00	806,070.60
9.00	RAIN WATER HARVESTING	0.00	610,401.80
10.00	SOLAR HOT WATER SYSTEM	120,427.40	923,791.40
11.00	WATER TREATMENT PLANT,PUMPS & EQUIPMENT		255,000.00
12.00	WATER SUPPLY PUMP PANEL		166,343.00
	TOTAL	**4,456,105.77**	**6,028,971.40**

	Design & Engineering Department						
	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.00	**SANITARY FIXTURES**						
1.01	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 :						
a)	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	each	16.00	2,964.10	47,425.60		
1.02	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, 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 :						
a)	W.C. pan with ISI marked black solid plastic seat and lid	each	28.00	4,201.05	117,629.40		
1.03	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 :						
a)	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	each	39.00	1,460.50	56,959.50		

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
b)	White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked	each	5.00	2,500.05	12,500.25		
1.04	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 :						
a)	Kitchen sink with drain board						
a i)	510x1040 mm bowl depth 250 mm	each	4.00	6,743.55	26,974.20		
1.05	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required :						
a)	Size 600x450x200 mm	each	10.00	2,758.65	27,586.50		
1.06	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 :						
a)	Rectangular shape 453x357 mm	each	44.00	598.30	26,325.20		
b)	Providing and fixing full size branded mirrors of 5mm thick float glass (of approved quality) complete with 6mm thick ply backing fixed to wall over suitable hardwood base frame complete with 32mmx19mm decorative teakwood moulding all around duly polished as per drawings and as directed.	sq.m.	2.00			5,000.00	10,000.00
1.07	Providing and fixing 600x120x5 mm glass shelf with edges round off, 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.	each	10.00	341.25	3,412.50		

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.08	Providing and fixing toilet paper holder :						
a)	Vitreous china	each	28.00	259.75	7,273.00		
1.09	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.	each	44.00	180.10	7,924.40		
1.11	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	each	3.00	14,961.65	44,884.95		
1.12	Providing and fixing water Jet Nozzle with hose pipe and haif turn CP brass angle valve to be fitted with seat cover of european water closet complete in all respect of approved quality	Each	28.00			1,369.00	38,332.00
1.13	Providing and fixing soap tray with CP brass lid and brackets fixed to wooden cleats with CP brass screws.(Jaquar model no.1131 or equivalent model of other approved make).	Each	10.00			508.00	5,080.00
1.14	Providing and fixing CP brass towel rail size of 600x20 mm of approved make complete with CP brackets fixed to wooden cleats with CP brass screws(Jaquar model no.1111 or equivalent model of other approved make)	Each	44.00			990.00	43,560.00
1.15	Providing and fixing brass coat hook of approved quality and make complete with material of fixing	Each	20.00			300.00	6,000.00

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.16	Extra for providing and fixing white vitreous china oval shape wash basin in place of normal wash basin with CI/MS brackets painted white, 15 mm CP brass pillar taps, 32 mm CP brass waste of standard pattern, including painting of fittings and brackets cutting and making good the walls wherever required						
a)	Counter top oval shape wash basin size 550x470 mm with centre tap hole, single 15 mm CP brass swan neck type pillar tap	Each	39.00			1,332.00	51,948.00
1.17	Providing and fixing stainless steel grab bar 25mm dia of required length minimum 750 mm with PVC cleats, C.P. brass screws etc. complete.	Each	10.00			668.00	6,680.00
1.18	Providing and fixing vitreous china division plate of size 960x165x325 mm of approved make and design including brass cleats,C.P. brass screws all fittings etc. complete in all respect	Each	3.00			2,500.00	7,500.00
1.19	Providing and fixing Hospital white vitreous china bed pan sink with P trap, size 600 x 450 mm with 10 litres C.I. High level flushing cistern flush pipe, C.I./M.S. bracket painting with 3 coats of white paint complete with accessories, C.P. brass fittings with vertical jet horizontal spray complete with control cocks.	Each	4.00			18000.0	72000.0
1.20	Supply , installation, testing and commissioning of compact floor mounted pedestal base surgical scrub sink tailor made to suit the site available compatiable with all the regular and standard plumbing system, with inbuilt geyser designed for use in operation theatre fabricated from 16 gauge 304 type stainless steel seamless welded,polished to satain finish including connecting to drainage and water points and making good cutting of walls and floor surface all complete and as directed						

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
a)	Tailor made surgical scrub sink (2 bay) Approximate size 1.4 mX0.54mX0.84m with 1 user elbow operated mixture tap, soap dispensers, drain outlet ,thermostatic control of water temperature	Each	1.00			250000.0	250000.0
	SubTotal(Sanitary Fixtures)				**378,895.50**		**491,100.00**

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2.00	**SOIL, WASTE AND VENT PIPES**						
2.01	Providing and fixing soil, waste and vent pipes.						
a)	100 mm dia.						
i)	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	Metre	1,135.00	857.30	973,035.50		
b)	150 mm dia						
	Centrifugally cast (spun) iron socketed pipe as per IS:3989	Metre	10.00			2,100.00	21,000.00
2.02	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 20mm nominal size) including cost of cutting holes and making good the walls etc.						
a)	for 100 mm dia. pipe	Each	75.00	112.50	8,437.50		
2.03	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.						
a)	100 mm						
a i)	Sand cast iron S&S as per IS-3989	Each	89.00	353.25	31,439.25		
2.04	Providing and fixing plain bend of required degree.						
a)	100 mm						
a i)	Sand cast iron S&S as per IS:3989	Each	117.00	296.35	34,672.95		
2.05	Providing and fixing heel rest sanitary bend.						
a)	100 mm dia						
a.i)	sand cast iron S&S as per IS-3989	Each	25.00	342.80	8,570.00		

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2.06	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.						
a)	100x100x100mm						
a.i)	sand cast iron S&S as per IS-3989	Each	25.00	579.75	14,493.75		
2.07	Providing and fixing single equal plain junction of required degree						
a)	100x100x100mm						
a.i)	sand cast iron S&S as per IS-3989	Each	54.00	522.85	28,233.90		
2.08	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts and nuts complete						
a)	100 mm						
a.ii)	sand cast iron S&S as per IS-3989	Each	25.00	469.40	11,735.00		
2.09	Providing and fixing terminal guard.						
a)	100 mm	Each	25.00	244.10	6,102.50		
a.i)	sand cast iron S&S as per IS-3989						
2.10	Providing and fixing collar						
a)	100 mm						
a.i)	Sand cast iron S&S as per IS-3989	Each	50.00	238.25	11,912.50		
2.11	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:						
a)	100 mm	Each	705.00	207.85	146,534.25		

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2.12	Providing Drip seal joint of approved make for the sand cast iron/centrifugaly cast iron pipes where the workability of lead joint can be effected due to space constraints.						
a)	100 mm	Each	300.00			100.00	30,000.00
2.13	Providing and fixing M.S. stays and clamps for sand cast iron / centrifugally cast (spun) iron pipes of diameter :						
a)	100 mm	Each	25.00	61.70	1,542.50		
2.14	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:						
a)	100 mm inlet and 100 mm outlet (P trap with 50 mm water seal)						
a i)	Sand cast iron S&S as per IS-3989	Each	56.00	801.70	44,895.20		
2.15	Cutting chases in brick masonary 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):						
a)	100 mm diameter pipe	Metre	25.00	252.10	6,302.50		
2.16	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint off any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:						
a)	100 mm diameter pipe	Metre	775.00	28.75	22,281.25		

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2.17	Providing and fixing floor drain points formed out of 65 mm dia GI elbow, including with 75mm dia Stainless Steel grating with frame, embedded in floor, all complete as directed.	Each	30.00			300.00	9,000.00
2.18	Providing and fixing C.P. brass bottle trap for wash basin including CP waste fittings complete 32 mm dia complete in all respect of approved quality.	Each	44.00			739.00	32,516.00
2.19	Providing and fixing C.P. brass bottle trap for sinks & urinal basin including CP waste fittings complete 40 mm dia complete in all respect of approved quality.	Each	17.00			744.00	12,648.00
2.20	Providing and laying cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) 80 mm thick all-round the SCI/centrifugally S&S pipe diameter.						
a)	100 mm dia	Metre	540.00			295.90	159,786.00
2.21	Providing and fixing dash fastner made of rust proof plated steel for holding the soil/waste supply pipes complete in all respect						
a)	Dash fastner for pipe more than 25 mm dia to 150 mm dia pipe of required size but not less than size 10 mm dia and 50 mm long minimum & shall be capable of taking 6 tonnes load and also include the supporting threaded rod of 8 mm dia and length 450 mm,the support MS structure angles etc. will be paid as per weight separately/approved steel structures support as per drawing.	Each	10.00			200.00	2,000.00

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2.22	Providing and fixing floor clean out plug consist of CI bend & GI socket heavy class with Brass cap & key for opening male threaded cap etc. including lead caulked to CI pipescomplete in all respects as per drawing/ sample approved by Engineer -in -ChargeFCO (floor clean out plug shall be flushed with floor finish						
	100 mm dia/150 mm dia	Each	5.00			1,800.00	9,000.00
2.23	Providing and fixing clean out plug consist of GI socket/nipple heavy class with threaded pludge for opening male threaded cap etc. including lead caulked to CI pipescomplete in all respects as per drawing/ sample approved by Engineer -in -Charge						
	100 mm dia/150 mm dia	Each	18.00			1,500.00	27,000.00
2.24	Providing and fixing G.I EXTENSION PIECE for 100 mm dia floor trap formed out of main pipe(Type A) with multiple side inlets, suitable for various dia pipes, side connections, including all fixtures and fittings as per site conditions and as per standard details and water tight sealing of joints and area surrounding the grating and as directed.	Each	56.00			574.00	32,144.00
2.25	Providing and fixing cPVC./GI pipes complete with cPVC /GI fittings including painting,jointing,testing the cost of cutting the chases and making good the same for waste water disposal complete as per direction of engineer incharge.						
a)	32 mm dia nominal bore (Wash basin to floor trap/floor drain)	Metre	45.00			390.00	17,550.00
b)	40 mm dia nominal bore (Sink,Urinal to floor trap)	Metre	20.00			450.00	9,000.00
c)	50 mm dia nominal bore (Floor Drain to Floor Trap)	Metre	30.00			560.00	16,800.00
2.26	Providing & fixing SS floor trap grating 143x143x5mm thick screwable with SS fixed frame of 150x150 mm size as per approved make & model	each	56.00			780.00	43,680.00

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2.27	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.						
a)	In gratings,frames,guard bar,ladder,railings,brackets,gates and similar works .	kg	40.00	77.90	3,116.00		
2.28	Providing and fixing WC connector socket(for vitreous china & CI pipe) of EDPM good quality with polypropelene body 100x150/100x250 of approved quality and make complete in all respect.	Each	28.00			350.0	9,800.00
	SUB TOTAL(SOIL, WASTE AND VENT PIPES)				**1,353,304.55**		**431,924.00**

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.00	**WATER SUPPLY**						
3.01	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.						
	Internal work – Exposed on wall						
a)	15 mm nominal outer dia pipes	Metre	20.00	133.95	2,679.00		
b)	20 mm nominal outer dia pipes	Metre	200.00	157.15	31,430.00		
c)	25 mm nominal outer dia pipes	Metre	150.00	197.90	29,685.00		
d)	32 mm nominal outer dia pipes	Metre	160.00	252.65	40,424.00		
e)	40 mm nominal outer dia pipes	Metre	180.00	348.25	62,685.00		
f)	50 mm nominal outer dia pipes	Metre	200.00	514.35	102,870.00		
g)	62.5 mm nominal outer dia pipes	Metre	100.00			1,230.00	123,000.00
h)	80 mm nominal outer dia pipes	Metre	50.00			1,550.00	77,500.00
3.02	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.						
a)	15 mm nominal outer dia pipes	Metre	350.00	219.55	76,842.50		
b)	20 mm nominal outer dia pipes	Metre	250.00	243.95	60,987.50		

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
c)	25 mm nominal outer dia pipes	Metre	100.00	298.85	29,885.00		
d)	32 mm nominal outer dia pipes	Metre	50.00	359.80	17,990.00		
e)	40 mm nominal outer dia pipes	Metre	20.00			405.00	8,100.00
3.03	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 and fittings with one step CPVC solvent cement,trenching,refilling and testing of joints complete as per direction of Engineer in Charge.						
	External Work						
a)	50 mm nominal outer dia pipes	Metre	30.00	475.70	14,271.00		
b)	62.5 mm nominal inner dia pipes	Metre	10.00	1,326.35	13,263.50		
3.04	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 :						
a)	50 to 80 mm nominal bore	Each	1.00	630.15	630.15		
3.05	providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)						
a)	25 mm nominal bore	Each	15.00	372.95	5,594.25		
b)	32 mm nominal bore	Each	12.00	450.90	5,410.80		
c)	40 mm nominal bore	Each	12.00	546.05	6,552.60		
d)	50 mm nominal bore	Each	4.00	780.60	3,122.40		
e)	65 mm nominal bore	Each	2.00	1,073.25	2,146.50		
f)	80 mm nominal bore	Each	2.00	1,832.95	3,665.90		
3.06	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main						

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1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
a)	50 mm nominal bore	Each	1.00			600.00	600.00
3.07	Providing and fixing unplasticised PVC connection pipe with brass unions:						
a)	45 cm length						
a i)	15 mm nominal bore	Each	157.00	61.70	9,686.90		
3.08	Constructing masonary chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for stop cock, with C.I. surface box 100x100x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cenment: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						
a)	With F.P.s bricks	Each	2.00	884.70	1,769.40		
3.09	Constructing masonary 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 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cenment: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						
a)	With F.P.s bricks	each	2.00	5,251.80	10,503.60		

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1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.10	Painting CPVC/G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work						
a)	15 mm nominal outer dia pipes	Metre	20.00	7.35	147.00		
b)	20 mm nominal outer dia pipes	Metre	200.00	8.65	1,730.00		
c)	25 mm nominal outer dia pipes	Metre	150.00	11.40	1,710.00		
d)	32 mm nominal outer dia pipes	Metre	160.00	13.45	2,152.00		
e)	40 mm nominal outer dia pipes	Metre	180.00	16.00	2,880.00		
f)	50 mm nominal outer dia pipes	Metre	200.00	18.80	3,760.00		
g)	65 mm nominal outer dia pipes	Metre	100.00			22.00	2,200.00
h)	80 mm nominal outer dia pipes	Metre	50.00			25.00	1,250.00
3.11	Painting G.I. /CPVC pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality.						
a)	50 mm diameter pipe	Metre	30.00	10.55	316.50		
b)	65 mm diameter pipe	Metre	10.00	12.95	129.50		
3.12	Providing and filling sand of grading zone V or coarser grade all-round the G.I./CPVC pipes in external work						
a)	50 mm diameter pipe	Metre	30.00	61.40	1,842.00		
b)	65 mm diameter pipe	Metre	10.00	96.95	969.50		
3.13	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.						
	Treated water Tank and Untreated water tank	per litre	30,000.00	6.10	183,000.00		
3.14	Providing and fixing C.P brass bib cock of approved quality confirming to IS:8931.						
a)	15 mm nominal bore	Each	44.00	397.50	17,490.00		

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.15	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.						
a)	15 mm nominal bore	Each	26.00	411.40	10,696.40		
3.16	Providing and fixing C.P. brass angle valve for basin mixer and geyser/cisterns points of approved quality conforming to IS:8931.						
a)	15 mm nominal bore	Each	157.00	449.35	70,547.95		
3.17	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to 18:8931.						
a)	15mm nominal bore.	Each	52.00	426.55	22,180.60		
3.18	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by muncipal board complete with bolts,nuts rubber, insersions etc. (the tail plases if required will be paid seperatly)						
a)	80mm dia nominal bore	Each	1.00	2,880.60	2,880.60		
3.19	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.						
a)	40 mm nominal bore, 206 mm long weighin not less than 690 gms	Each	2.00	961.75	1,923.50		
b)	50 mm nominal bore, 242 mm long weighin not less than 1240 gms	Each	2.00	1,391.50	2,783.00		
3.20	Cutting holes upto 30x30 cm in walls including making good the same						
a)	with common burnt clay F.P.S.(non modular) bricks	Each	50.00	152.00	7,600.00		

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.21	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	Each	50.00	143.95	7,197.50		
3.22	Extra for providing wash basin mixer pillar tap in place of normal pillar tap	Each	39.00			1,021.00	39,819.00
3.23	Providing & fixing full way lever operated forged brass ball valve of brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 10 Kg / sqcm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.						
a)	15 mm diameter	Each	2.00			240.00	480.00
b)	20 mm diameter	Each	18.00			332.00	5,976.00
3.24	Providing and fixing mosquito proof coupling of approved Municipal design for scour and vent pipes for RCC overhead tanks complete in all respects						
a)	20 mm diameter	Each	7.00			44.80	313.60
b)	25 mm diameter	Each	6.00			50.00	300.00
c)	32 mm diameter	Each	5.00			55.00	275.00
d)	40 mm diameter	Each	4.00			60.20	240.80
3.25	Providing & fixing 9 mm thick thermal insulation tubing of elastomeric flexible material on hot water supply/return pipes having hermetic blistered closed cell structure of expanded synthetic rubber over pipes/ fitting as per manufacturer's specifications etc.complete.						
a	15 mm to 25 mm diameter	Meter	50.00			120.00	6,000.00
b)	32 mm to 50 mm diameter	Meter	10.00			280.00	2,800.00
3.26	Providing and fixing C.P. brass Overhead (Rain Fall) shower (100mm) with arm and wall flange complete including cutting and making good the walls wherever required.	Each	26.00			1,383.00	35,958.00

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1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.27	Providing and fixing C.P. brass lab sink pillar tap with long elbow operating lever handle of approved model and make complete in all respect (Aqua bath, Jaquar,Marc)	Each	10.00			2,525.50	25,255.00
3.28	Providing & fixing solid state fully hygienic no touch hand drier of approved make rated for continuous repeat usage with solid state time delay LSF protection, with independent ambient light level & seasonal control temperatures including providing necessary C.I./M.S. brackets painted with two or three coats of enamel paint of approved shade over a coat of primer, wiring cables from drier to plug, plug tops etc. complete including cutting and making good the walls wherever required.	Each	2.00			16,065.00	32,130.00
3.29	Supplying, fixing, testing and commissioning of storage type water heater (Geyser) etc. with Stainless steel body , copper container , automatic thermostatic control electric element, pressure release valve, M.S. nuts and bolts etc. conforming to IS: 2082						
b)	25 Litre Capacity	Each	26.00			8,550.00	222,300.00
3.30	Providing & fixing water storage cooler of approved make and brand with SS body having minimum flow rate of 40 ltrs. Per hour and storage capacity 80 ltrs. Complete in respects.(VOLTAS/ BLUE-STAR/ USHA SHRIRAM)	Each	2.00			39,150.60	78,301.20

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.31	Providing and fixing approved make & suitable model of R.O. plant (fully automatic operation)100ltrs. Per hour flow rate having capacity to treat the raw water and average recovery not less than 35% . The operating voltage to 230 volt AC +/- 10% alongwith required capacity on line SS pump of approved make (3HP minimum) and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, storage tank (3.0 mm (minimum) thick S.S. 304 sheet) 1500 lts of suitable size and ita supporting structure, over voltage and over current protection with switch mode power supply system complete in all respects including installation and fittings with the following provisions: (IONIEXCHANGE/ KENT/AQUAPROCESS,Pantair)						
a)	10 micron polypropylene sediment pre filter						
b)	10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating						
c)	Required Nos. and size of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type						
d)	UV lamp of minimum capacity 100LPH and minimum lamp wattage 15W						
e)	MS powder coated frame efficient of TDS removal more than 90%. Antiscalant dosing and acid dosing system for self flushing/cleaning.Pressure switches and gauges, pH correction dosing system, Digital TDS meter, Digital pH meter, electric panel and necessary instrumentation included Rotameter.MS structure and fibre glass sheet weather protection cover as per site condition.	Each	1.00			100,000.00	100,000.00

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
3.32	Supplying, installing, testing and commissioning vertical on line multi stage centrifugal pumping set with mechanical seal, C.I. volute and SS impeller & SS shaft connected to a TEFC induction motor of suitable HP for 415 volts, 3 phase, 50 cycles A.C. supply with 150 mm dia pressure gauge with SS/gunmetal isolation cock, vibration eliminating pads, base plate wiring upto panel and equipment for water level controller to start and stop the pump automatically at predecided levels of the water in the tank with provision of protection for dry run etc. complete in all respect (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).						
a)	**Domestic water pumps (Treated water transfer pump to terrace tank)**						
	Capacity 150 lpm						
	Head 30 M	Each	2.00			42000.0	84000.0
b)	**Domestic water pumps (Raw water Transfer pump to terrace tank)**						
	Capacity 150 lpm						
	Head 30 M	Each	2.00			42000.0	84000.0
	SUB TOTAL(Water Supply)				**874,031.05**		**930,798.60**

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
4.00	**SEWARAGE & DRAINAGE**						
4.01	Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the pro-portion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.						
a)	100 mm diameter	Metre	44.00	150.10	6,604.40		
4.02	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:						
a)	100 mm diameter S.W. pipe/RCC NP2	Metre	44.00	496.90	21,863.60		
b)	150 mm diameter S.W. pipe/RCC NP2	Metre	300.00	607.70	182,310.00		
c)	250 mm diameter S.W. pipe/RCC NP2	Metre	50.00	819.20	40,960.00		
4.03	Providing and fixing square-mouth S.W. gully trap grade 'A'' 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 not less than 2.70 kg as per standard design:.						
a)	150x100mm size P type						
a.i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	22.00	1,280.00	28,160.00		
4.04	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement:2 fine sand) including testing of joints etc. complete						
a)	150 mm dia R.C.C. pipe	Metre	300.00	254.50	76,350.00		
b)	250 mm dia R.C.C. pipe	Metre	50.00	342.45	17,122.50		

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1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
4.05	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand), R.C.C. top slab with 1:2:4 mix (1cement : 2 coarse sand : 4graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 (1cement : 4 coarse sand : 8graded stone aggregate 40 mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a 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 all complete as per standard design.						
a)	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):						
a i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	25.00	7,061.70	176,542.50		
4.06	Extra depth for manholes						
a)	Size 90 x 80 cm						
a i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	2.00	4,061.70	8,123.40		
4.07	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement: 3 coarse sand: 6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design:						

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
a)	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :						
a i)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	4.00	7,033.25	28,133.00		
4.08	Extra depth for circular type manhole 0.91m dia (at bottom) with beyond 0.91m to 1.67 m						
a)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	0.50	3,498.25	1,749.13		
4.09	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 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 specification 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	87.00	256.75	22,337.25		

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1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
4.10	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cemnet mortar 1:3 (1 cement:3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete (including obtaining approval from DJB/Municipal corporation)						
a)	For pipes 100 to 250 mm dia	Each	1.00	275.00	275.00		
4.11	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :						
a)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	15.00	3,193.50	47,902.50		
4.12	Constructing brick masonry open surface drain including factory made perforated RCC cover with edge protected with MS plate of 3 mm thick with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 fine sand) including earth excavation, 10cm thick bed concrete 1:5:10 (1 cement: 5 fine sand :10 graded stone aggregate 40mm nominal size) and 25mm thick cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 12.5 mm nominal size) for filling hunches including 12mm cement plaster 1:4 (1 cement:4 coarse sand) with a floating coat of neat cement inside the drain, its top and exposed side including disposal of surplus earth complete as per standard design.						
	25cm drain 30cm average depth						
a)	With F.P.S bricks	Metre	300.00			1,800.00	540,000.00

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
4.13	Constructing septic tank, of size 7.5mx2.7mx3.0m approx. height(Height to be fixed as per site requirement i.e. below invert level of last manhole (1.5 m water depth) , in RCC M20, 200 mm thick (minimum) walls and 400 mm (minimum) base slab all as per detail design including all excavation, 20 cm thick bed concrete in 1:4:8 (one cement: 4 fine sand: 8 stone aggregate 40 mm) cement plaster 1:3 (one cement :3 coarse sand) with a floating coat of neat cement, top slab in RCC M20, including centring, shuttering and steel work, also providing and fixing two nos.D.I. manhole cover & frame of size 560mm dia.(medium duty, lockable type) and cost of 75mm dia C.I. vent pipe upto 3 m height with C.I. Ventilating Cowl and providing & fixing 150 mm dia SW tees for inlet and outlet, C.I Rungs@300 mm c/c all complete in every respect as per drawing and as directed. The agency has to provide the shop drawings (structure and PHE) as per IS requirements and obtain the approval from HSCC.	Each	1.00			95000.0	95,000.00
4.14	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.						
a)	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	2.00	15,228.15	30,456.30		

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
4.15	Supply, installing, testing and commissioning vertical fully floodable type **submersible sewage pump of non-corrosive material with shredder/cutter** in close coupled design single stage, suitable for handling minimum 20 mm dia solids for transferring raw sewer from sump to outside the building with float switch for automatic start and stop arrangement with panel and wiring, chain and pulley, mechanical seal complete in all respect as per instruction of the Engineer in charge. (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).Star delta suitable starter complete in all respect for automatic/manual operation of pump,start and stop push button contactor with required overload production and single phase preventor.Electicl panal complet as per instruction of the Engineer in charge						
	Material of Construction (M.O.C): Corrosion Resistant in general : Casing — Cast Iron						
	: Impeller — Ductile cast iron						
	: Bearings — Anti friction, prelubricated ball bearings, packed with grease for life.						
	Motor: — Dry Motor with built in over load protection						
	Protection - IP68.						
	Insulation Class - F						
	Duty of each pump						
i)	150 LPM against 8 M head (Sewage pump)	Each	1.00			70000.0	70,000.00
ii)	Electicl panal cable,etc complete as per instruction of the Engineer in charge	Set	1.00			40000.0	40,000.00
	SUB TOTAL(SEWERAGE AND DRAINAGE)				**688,889.58**		**745,000.00**

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
5.00	**EARTH WORK**						
5. 01	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 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m						
a)	All kinds of soil	cum	53.00	130.80	6,932.40		
5. 02	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, within a lead of 50 m:						
a)	All kinds of soil						
i)	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	metre	394.00	165.60	65,246.40		
5.03	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m	cum	18.00	83.80	1,508.40		
	SUB TOTAL(EARTH WORK)				**73,687.20**		

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
6.00	**EXTERNAL WATER SUPPLY**						
6. 01	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 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, within a lead of 50 m :						
a)	All kinds of soil						
a.ii)	Pipes, cables etc, not exceeding 80 mm dia but not exceeding 300 mm dia	metre	280.00	165.60	46,368.00		
6.02	Providing and fixing gun metal non-return valve of approved quality (screwed end)						
a)	100 mm nominal bore						
a.i)	Horizontal	each	2.00			3500.0	7000.0
6.03	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :						
a)	100 mm diameter						
a.i)	Class I	each	4.00	3068.35	12,273.40		
6.04	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 :						

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
a)	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	2.00	5251.80	10,503.60		
6.05	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :						
a)	20 mm diameter pipe	metre	20.00	5.15	103.00		
d)	100 mm diameter pipe	metre	100.00			50.0	5000.0
6.06	Providing and filling sand of grading zone V or coarser grade all-round the G.I./CPVC pipes in external work						
a)	20 mm diameter pipe	metre	20.00	55.50	1,110.00		
b)	100 mm diameter pipe	metre	100.00	105.80	10,580.00		
6.07	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required:						
a)	20 mm nominal bore	each	2.00	282.9	565.80		
b)	100 mm diameter pipe	each	2.00			2700.0	5400.0
6.08	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):						
a)	50 mm dia	each	1.00	4018.15	4,018.15		
6.09	Providing and laying D.I. specials of class k-12 suitable for push-on jointing as per IS:9523						
a)	Upto 600 mm dia	quintal	13.00	13,958.95	181,466.35		
6.10	Providing push-on-joints to Centrifugally (Spun) Cast Iron pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket						
a)	150mm dia pipes	joint	120.00	79.05	9,486.00		
6.11	Providing and laying S&S Centrifugally Cast (Spun)/Ductile Iron pipes confirming to IS:8329:						

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
a)	150 mm dia Ductile Iron Class k-7 pipes	metre	280.00	1,229.05	344,134.00		
6.12	Disinfecting C.I./D.I. water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with freash water, operation to be reaeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory						
a)	150 mm diameter C.I./D.I. pipe	100metre	2.80	863.55	2,417.94		
6.13	Providing and fixing puddle flanged including 60 cm long GI pipe piece welded/threaded with MS plates 450x450x6 mm thick with both end screwed/flanged.						
a)	For 80 mm dia pipe	Each	2.00			950.00	1900.0
b)	For 100 mm dia pipe	Each	4.00			1200.00	4800.0
6.14	Providing and fixing suitable G.I. vent pipe upto 1m high Class-B (medium quality) with fittings complete as per drawing and as directed.						
a)	100mm Dia	Each	4.00			1200.00	4800.0
6.15	Providing and fixing double seal type D.I. Manhole cover of 560 mm clear internal diameter of over all heavy duty with locking arrangement complete in all respects.	Each	4.00			7500.00	30000.0
6.16	Providing and fixing garden hydrant of approved quality and make complete in all respect	each	4.00			450.0	1800.0
6.17	Providing and fixing G.I. pipes class B complete with G.I. fittings and clamps, including cutting and making good the walls etc.						
a)	20 mm dia nominal bore	Metre	20.00	188.05	3,761.00		
a)	100 mm dia nominal bore	Metre	200.00			1243.0	248600.0
	SUBTOTAL (EXTERNAL WATER SUPPLY)				**626,787.24**		**309300.0**

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
7.00	**RAIN WATER PIPING**						
7.01	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	50.00	32.75	1,637.50		
7.02	Providing and fixing rain water ,soil, waste and vent pipes.						
a)	100 mm dia.						
a i)	Centrifugally cast (spun) iron socketed pipe as per IS:3989	Metre	280.00	857.30	240,044.00		
b)	150 mm dia pipe as per IS:3989	Metre	120.00			2,100.00	252000.0
7.03	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 20mm nominal size) including cost of cutting holes and making good the walls etc.						
a)	for 100 mm dia. pipe	Each	105.00	112.50	11,812.50		
b)	for 150 mm dia pipe	Each	45.00			131.6	5922.0
7.04	Providing and fixing plain bend of required degree.						
a)	100 mm						
a ii)	Sand cast iron S&S as per IS:3989	Each	35.00	296.35	10,372.25		
b)	150 mm	Each	15.00			1065.0	15975.0
7.05	Providing and fixing heel rest sanitary bend.						
a)	100 mm dia						
a.ii)	sand cast iron S&S as per IS-3989	Each	35.00	342.80	11,998.00		
b)	150 mm dia	Each	15.00			1211.0	18165.0
7.06	Providing and fixing collar						
a)	100 mm						
a.ii)	Sand cast iron S&S as per IS-3989	Each	70.00	238.25	16,677.50		
c)	150 mm	Each	30.00			930.0	27900.0

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
7.07	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:						
a)	100 mm	Each	190.00	207.85	39,491.50		
b)	150 mm	Each	80.00			401.0	32080.0
7.08	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:						
a)	100 mm diameter pipe	Metre	280.00	28.75	8,050.00		
c)	150 mm diameter pipe	Metre	120.00			60.0	7200.0
	SUB TOTAL(Rain Water pipe & fitting)				**340,083.25**		**359242.0**

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
8.00	**BOREWELL(1 No)**						
8.01	Drilling by suitable rig as per IS : 2800-1979 (percussion or combination rig) or Reverse Rotary to suit site condition from ground level in all kind of soils and weathered rock including boulders (excluding rock) diameter of bore 300mm including carry out hydrological survey report before boring & getting the approval based on Hydrogeological survey before start of the work.Also getting approval from local authority if any required						
a)	0-30m	metre	30.00			300.0	9000.0
b)	30-60m	metre	30.00			400.0	12000.0
c)	60-90m	metre	30.00			550.0	16500.0
d)	90-120 m	metre	30.00			700.0	21000.0
8.02	Extra additional for drilling in Ordinary Rock if any found	metre	25.00			1200.0	30000.0
8.03	Extra additional for drilling in Hard Rock if any found	metre	25.00			1500.0	37500.0
8.04	Providing and lowering uPVC casing/housing pipe 150mm dia. with wall thickness 10 mm conforming to IS :12818 including sockets of standard design.	metre	70.00			1200.0	84000.0
8.05	Providing & fixing uPVC screen/slotted pipe with 1.5 mm to 3mm (slots as per strata condition) including sockets of standard design as per IS: 12818/1992.						
a)	150 mm dia uPVC socketed pipe with wall thickness 10.0 mm	metre	80.00			1500.0	120000.0
8.06	Providing and fixing in position threaded iron cap with locking arrangement of approved design to prevent foreign matters getting into the bore-hole as required.	Each	1.00			5500.0	5500.0
8.07	Providing and laying rounded pea gravel washed & served 3 to 6 mm nominal boreas per relevant ISI code.	Cum	16.00			2000.0	32000.0
8.08	Providing and laying cement concrete 1:2:4 mix for sanitary sealing of well at top.	Cum	1.00			3500.0	3500.0

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
8.09	Supplying, lowering and fixing in position reducer ,PVC bail plug with "U" hooks as per IS:2800-1964.	Each	1.00			1500.0	1500.0
8.10	Development of Tubewell including testing of yield depression & quality of water (for all parameters of potable water), contractor to obtain certificate for quality for water from Competent Authority approved by client or Engineer- In -Charge.						
a)	Development of Tube well by high capacity air compressor till the clear water discharge but not more than 100 hours.	per hour	80.00			300.0	24000.0
b)	Additional development of Tube well by high an over pumping unit till complete development of tube well does not clear by maximum 100 hours air compressor	per hour	50.00			450.0	22500.0
8.11	Tranportation, mobilisation and demobilisation or drilling equipment and ancillary equipment to site including clearing and cleaning the site after completion of work.	set	1.00			7000.0	7000.0
8.12	Providing and fixing brass full way valve with C.I. wheel of approved make, tested to a pressure of 21 kg/sqcm.						
a)	80 mm dia	Each	1.00			1106.3	1106.3
8.13	Providing and fixing gunmetal non return valve of approved make tested to a pressure of 21kg/sqcm.						
a)	80 mm dia	Each	1.00			1106.3	1106.3
8.14	Providing & fixing G.I. pipes (heavy class)confirming to IS with special fittings in external works including earthwork ,excavationin all kinds of soil including ordinary rock,refilling, painting pipes & fitting complete in alll respects.						
	80 mm dia	Metre	100.00			1334.0	133400.0

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
8.15	Providing & filling sand of grading zone V or coarser grade all around GI pipe in external work						
	80 mm dia	Metre	100.00			110.0	11000.0
8.16	Submersible pumps						
	Providing and installing submersible pump and electrical panel suitable for 6" dia casing of bore with SS impeller, high tensile SS shaft, copper wound squirrel cage wet type induction motor 2880 rpm, 415 V, 50 Hz,3 phase A.C. supply, conforming to ISS: 8034-1976, capacity 250-500 litre per minute at 70-120 m head along with a directly coupled submersible type squirrel cage electric induction 5 **H.P(minimum).** motor suitable for operation on 400 V, 3 phase, 50 c.p.s. A.C. supply, water lubricated bearings and provided with pivoted segment type thrust bearings to withstand non-vertical lead with minimum wear and tear and duly fitted with device to take up the expansion of water with heating of motor, including supply, testing and commissioning of elctrical panel from the same manufacturer, complete with all accessories in all respects. The contractor to obtain approval for model and make of pumpset & suitable Electrical panel after having yield report of fully developed tube well and submite actual bore strata chart.						
	including supplying laying and fixing water proof PVC insulated flat submersible cable 3x10 sqmm with end termination with its accessories. complete in all respect as required. 1 No. 3 Phase, fully automatic star-delta starter, type - II of 15 HP with thermal overload relay, contactor, Timer, Push Buttons and Auto-manual selector switch etc complete as required.	set	1.00			223458.0	223458.0
8.17	Carrying out Electrical logging of Borewell before lowering of pipe for analysiing of water quality including Electrical logging report, calculation etc.	Job	1.00			10000.0	10000.0
	SUBTOTAL (BOREWELL)						**806070.6**

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
9.00	**RAIN WATER HARVESTING(2NO.)**						
9.01	Designing and Constructing of percolation pit cum perforated well 3000mm. dia upto 4000mm deep, 230 mm thick brick masonry work alround upto 1.5 m deep with 75 class brick in cement mortar 1:4, 200 mm foundation concrete in 1:4:8 mix below brick work only, 150 mm thick precast removable RCC top slab with required steel reinforcement in cement concrete 1:2:4 mix, filled with coarse aggregate, SFRC covers, river pebbles of requisite size stone as shown in the drawing including centering and shuttering, as shown complete as per detailed drawings complete.	Each	2.00			98048.6	196097.2
9.02	Drilling as per IS : 2800-1964 (with percussion or combination rig) from ground level in all kind of soils including boulders (excluding rock) diameter of bore 450mm.						
a)	0-50m	Metre	60.00			700.0	42000.0
9.03	Extra for drilling in Ordinary Rock	Metre	10.00			1200.0	12000.0
9.04	Extra for drilling in Hard Rock	Metre	10.00			1500.0	15000.0
9.05	Providing and lowering of 200 mm dia uPVC blank/ slotted pipe with ribs, special fittings, jointing conforming to IS 12818 - 1992.	Metre	60.00			1200.0	72000.0

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
9.06	Constructing bar screen / settling tank, of sizes 4500x2500 with suitable depth up to 2.0 m in 1: 4 Cement Mortar (one cement : 4 coarse sand) height as per site requirement, in brick masonry 350mm thick walls upto water level and 230mm thick walls above water level & upto ground level, including all excavation, 20 cm thick bed concrete in 1:4:8 (one cement 4 fine sand 8 stone aggregate 40 mm), cement plaster 1:3 (one cement :3 coarse sand) with a floating coat of neat cement as inside finish , top slab in RCC 1:2:4, including centring, shuttering and steel work, also providing and fixing D.I. manhole cover & frame of size 605mm x 450mm of weight not less than 38 kg (frame + cover) and cost of 100mm dia C.I. vent pipe with C.I. Ventilating Cowl and suitable wire mesh provision for inlet, 115mm baffle walls extending 2/3 the width spaced@500mm c/c including finishing with 1:3 cement plaster 15mm thick with floating coat of neat cement slurry , all complete in every respect as per drawing and as directed to suit site condition.	Each	2.00			136652.3	273304.6
	SUBTOTAL (RAIN WATER HARVESTING)						**610401.8**

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
10.00	**SOLAR WATER HEATING SYSTEM & RECIRCULATION OF HOT WATER SYSTEM**						
10.01	Supply, installation, testing and commissioning of solar water heating system, Thermosyphon type, all complete based on Flat plat collector system (Cu-Cu Type only) comprising of but not limited to the following:						
a)	Requisite number of Flat plate collectors of 2 sq. mtr. collector area. Collector absorber plate to be made of copper tubes & copper fins only						
b)	Hot water storage tank made of stainless steel 304- food grade quality with 100 mm Glass wool insulation and cladding with 24 SWG Aluminum sheet. One temperature measuring device and suitable inlet, outlet and drain connections on the storage tank to be provided.						
c)	Heat Exchanger - Cage type Internal Heat Exchanger made of SS pipes shall be provided inside the Solar Tank. Heat exchangers shall have min. heat transfer area of 0.24 sq. mtrs. for every 100 LPD calacity. Suitable make up tank for the Heat Exchanger circuit shall also be provided						
d)	Interconnecting system piping shall consist of B Class insulated GI pipes covered with 50mm thick glasswool & clad with 26 SWG Aluminium Sheet. All Gate/Ball valves shall be of ISI make.						
e)	Electrical control panel, cabling from panel to pumps shall be provided						
f)	The solar collector shall be arranged on roof of building in such a way that shadow can be avoided and requisite number of MS support for collector/tanks of minimum 35x35x5 MS angle adequate for 150 Km/Hr wind speed.						

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
g)	Solar water heating system based on Flat plat collector systmem technology with output capacity of as mentioned below with hot water at 60 degree centigrade having reqired Nos. solar collectors . As per complete item as per technical specification of make BHEL/TATA/EMMVEE. The system has to be installed by Manufacturers authorised distributors/approved specialised firms of Solar water heating of approved makeThe shop drawing of the systems shall be provided by the agency as per site condition obtain the proper efficiency The system shall be procurred after obtaining the approval of shop drawings from HSCC / Engineer-in-charge. The solar hot water will supply the hot water to all the geyser,in view of this provision the backup electrical heating system at terrace hot water tank will not be provided for non solar days.						
i)	Solar System of Capcity 1500 Litre/day (With minimum 12 nos of Collect) of 2.0 Sqm area	each	2.00			447711.0	895422.0
10.02	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.						
	Internal work- Exposed on wall						
a)	15 mm nominal outer dia pipes (SDR-11)	metre	10.00	133.95	1,339.50		
b)	20 mm nominal outer dia pipes (SDR-11)	metre	100.00	157.15	15,715.00		
c)	25 mm nominal outer dia pipes (SDR-11)	metre	50.00	197.90	9,895.00		
d)	32 mm nominal outer dia pipes (SDR-11)	metre	75.00	252.65	18,948.75		
e)	40 mm nominal outer dia pipes (SDR-11)	metre	50.00	348.25	17,412.50		

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Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
10.03	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.						
a)	15 mm nominal outer dia pipes (SDR-11)	metre	100.00	219.55	21,955.00		
b)	20 mm nominal outer dia pipes (SDR-11)	metre	100.00	243.95	24,395.00		
c)	25 mm nominal outer dia pipes (SDR-11)	metre	25.00	298.85	7,471.25		
10.04	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):						
a)	25 mm nominal bore	each	4.00	372.95	1,491.80		
b)	32 mm nominal bore	each	4.00	450.90	1,803.60		
10.05	Providing & fixing 9 mm thick thermal insulation tubing of elastomeric flexible material having hermetic blistered closed cell structure of expanded synthetic rubber over pipes/ fitting as per manufacturer's specifications etc.complete.						
a)	15 mm dia to 25 mm dia	each	285.00			45.4	12939.0
b)	32 mm dia to 50 mm dia	each	70.00			62.8	4396.0
10.06	Providing and fixing gun metal ball valve of approved quality						
a)	15 mm nominal bore	each	2.00			1797.8	3595.6
b)	20 mm nominal bore	each	3.00			2479.6	7438.8
	SUBTOTAL(SOLAR WATER HEATING SYSTEM & RECIRCULATING SYSTEM)				**120,427.40**		**923791.4**

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
11.00	**WATER TREATMENT PLANT (for Domestic use))**						
	Suplying, Installing, testing & commissioning of indoor package type water treatment plant of capacity 3.0 cum per hr. with 12 hours operation time, comprising of the following including all necessary piping, control valves, other accessories etc. complete as per drawing and as per drawing and as directed.						
	FILTER						
	Supply, installation & testing and commissioning of MULTI GRADE Filter vertical floor mounted fabricated with Fibre reinforced Plastic (FRP) with frontal piping & valves, back wash system & filter media etc. with single lever operated multiport valve system with standard fittings like manhole cover, pressure gauge at inlet & outlet, sampling cock, rinse drain valve, air vent valve with piping, bolts, nuts & rubber gaskets.						
	Flow rate = 3.0 cub. m/hour						
	Working pressure = 3.5 kg/Sq. cm.						
	UV WATER STERILISERS						
	High performance on line UV water sterilisers of capacity 2000lph designed on at least 50 J/Sq. M. UV dosage, comprising of glass UV chamber in SS 316 housing, UV lamp and electrical circuit, wall mounted model / line mounted model, capacity 50lpm, minimum lamp rating :150 watts - 1Nos.						

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
	Supplying, installing, testing and commissioning vertical online/horizontal centrifugal pumping set with mechanical seal, C.I. Housing, C.I. volute and SS impeller & SS shaft connected to a TEFC induction motor of suitable HP for 415 volts, 3 phase, 50 cycles A.C. supply with 150 mm dia pressure gauge with gunmetal isolation cock, vibration eliminating pads, base plate wiring upto panel and equipment for water level controller to start and stop the pump automatically at predecided levels of the water in the tank with provision of protection for dry run etc. complete in all respect (The shop drawing or the pumps along with its characteristics curves, model and technical data etc. are to be submitted for approval before purchase of pump).						
	Filter feed pump(1 no.)						
	Capacity 50 lpm						
	Head 30M	Set	1.00			150000.0	150000.0
11.01	**WATER TREATMENT PLANT (for A/C use))**						
	Suplying, Installing, testing & commissioning of indoor package type soft water treatment plant of capacity 1 cum per hr. with 10 hours operation time, comprising of the following including all necessary piping, control valves, other accessories etc. complete as per drawing and as per drawing and as directed.						
a)	**FILTER**						

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
	Supply, installation & testing and commissioning of MULTI GRADE Filter vertical floor mounted fabricated with Fibre reinforced Plastic (FRP) with frontal piping & valves, back wash system & filter media etc. with single lever operated multiport valve system with standard fittings like manhole cover, pressure gauge at inlet & outlet, sampling cock, rinse drain valve, air vent valve with piping, bolts, nuts & rubber gaskets.						
	Flow rate = 1.0 cub. m/hour						
	Working pressure = 3.5 kg/Sq. cm.						
b)	**Softener**						
	Supply, installation & testing and commissioning of upflow cation Ion exchange resin water Softener fabricated with Fibre reinforced						
	Flow rate = 2.0 cub. m/hour- 0.3 cub.m/hour						
	Working pressure = 3.5 kg/Sq. cm.						
	Raw Hardness-700-1500 mg/l						
	Soft water quality-Commercial zero hardness(less than 5ppm)						
	Output per Regeneration-5 cum.(min.)	Each	1.00			105000.0	105000.0
	Subtotal (Water treatment Plant,Pump and Equipment)						**255000.0**

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
12.00	**WATER SUPPLY PUMP PANEL**						
	Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, powder coated, wall mounted/ free standing type, dust, damp and vermin proof, indoor type Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as required.						
	INCOMER :						
	100 Amp 415 volts, 35 KA (Isc), FP MCCB with e/f protectionthermal magnetic release having variable current settings.						
	R,Y&B phase indicating lamp (LED type) with 2A control SP MCB						
	"ON" and "OFF" LED indicating lamp and 2A control SP MCBs						
	Push button for CLOSE and TRIP						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
	1 no. 0 to 500 V Digital voltmeter with selectot switch						
	1 to 0 to 100 Amps Digital ammeter with selector switch with one set of 100/5A C.T. s						
	BUSBARS :						
	200 Amp TPN busbars of aluminium						
	OUTGOINGS :						
	4 Sets of following						

	Name of Work:BOQ of Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM						
Sl. No.	**Description of Item**	**Unit**	**Total qty.**	**DSR 2012 Rate (Rs)**	**Amount DSR**	**Market Rate**	**Market Amount**
1	**3**	**4**	**5**	**6**	**7**	**8**	**9**
	1 No. 32 Amp. 415/500 volts,25 KA, three Pole, Moulded Case Circuit Breaker with variable current setting .						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
	1 No. 3 Phase, DOL starter 2 HP with thermal overload relay, contactor, Push Buttons and Switches etc complete as required.						
	Single Phase preventer						
	1 Set of phase indicating lamp with 2A SP control MCBs						
	Neon indicating Lamps for "ON" , "OFF" & "TRIP" indication with 2A SP control MCBs.						
	3 Sets of following						
	1 No. 16 Amp. 415/500 volts,25 KA, three Pole, Moulded Case Circuit Breaker with variable current setting .						
	Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.						
	1 No. 3 Phase, DOL starter 1 HP with thermal overload relay, contactor, Push Buttons and Switches etc complete as required.						
	Single Phase preventer						
	1 Set of phase indicating lamp with 2A SP control MCBs						
	Neon indicating Lamps for "ON" , "OFF" & "TRIP" indication with 2A SP control MCBs.						
	63 Amp 415 volts, 35 KA (Isc), FP MCCB with e/f protection thermal magnetic release having variable current settings.						
	WATER SUPPLY PUMP Panel as mentioned above	Set	1.00			166,343.00	166,343.00
	Sub Total(Water supply Pump Panel)						**166,343.00**
	Note: Based on the tender drawing the agency has to prepare the internal & external plumbing shop drawing and obtain the approval of the same before start of work						
	End of plumbing BOQ						

PROJECT NAME: Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM

ABSTRACT OF COST

S.No	DESCRIPTION OF WORK	DSR AMOUNT(Rs)	MARKET RATE AMOUNT(Rs)
1	FIRE FIGHTING	79,042.60	1,753,845.80
	Sub Total(Fire Fighting work)	79,042.60	1,753,845.80

PROJECT NAME: Proposed 100 bedded MCH wing for district female hospital at Chattisgarh RMNCH Project under NRHM

Name of Works: BOQ of Fire Fighting Works

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.00		**FIRE FIGHTING SYSTEM**						
1.01		Providing, fixing joiting and testing of Heavy (class -C) G.I. pipes as per relevant IS :1239/4736 with special accessories like tees, elbow, gesket, flanges, flanged joints, rubber insertion nuts and bolts including earth work excavatin and trenching, wrapping pipekot 4mm thick 500mm width tar based plymaric corrosion protection tape or equivalent suitable to GI/ MS pipe line including applying uniform coat of cold pipekot primer complete 1 m below the ground level, refillling in layers not exeeding 20 cm in depth consolidated each deposited layer by ramming & watering complete in all respect as pe IS : 1022 (Under ground)						
a)	NS	150 mm dia G.I. Pipe with flange joints (5.4 mm wall thickness)	Metre	250.0		3400.00		850000.00
b)	NS	80 mm dia G.I. Pipe with flange joints	Metre	10.0		1777.00		17770.00
1.02	NS	Heavy class G.I. pipes conforming to IS with accessories like tees, elbows, flanged joints, rubber insertion, nuts, bolts or welded joints including fixing the pipe with suitable flat iron strip clamps/brackets, structural members, dash fastener , cutting hole and chases in walls, floor, R.C.C. slab etc. and making good the same, including painting pipes and fittings with a primer coat of steel primer and two coats of postal red enamel paint etc. complete as required. (All the fitting i.e. tee /elbow, Valve shall be joint the pumps will flanged joints)						
a)	NS	200 mm dia (with Flanged joints)	Metre	10.0		3250.00		32500.00

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
b)	NS	150 mm dia (with Flanged joints)	Metre	30.0		1657.00		49710.00
c)	NS	100 mm dia (with Flanged joints)	Metre	10.0		1101.00		11010.00
d)	NS	80 mm dia	Metre	20.0		788.00		15760.00
1.03	NS	Providing and fixing Single headed hydrants flanged inlet with 63 mm female instantaneous outlet of gunmetal complete with male blank caps, chains conforming to IS:5290 type A with stainless steel orifice plate (if required) to keep the pressure not more than 3.5 kg/sq.cm at any point.	Each	9.0		6823.00		61407.00
1.04	NS	Providing 63mm dia 15 m long reinforced rubber lined hose pipe conforming to IS: 636-1992 Part-II with gunmetal male & female coupling wire wound with pipe as required.	Each	6.0		4611.00		27666.00
1.05	NS	Providing and fixing 63mm dia 15 m long canvas hose pipe complete with gunmetal male & female coupling wire wound with the pipe The pipe shall confirm to IS: 4927.	Each	12.0		3790.00		45480.00
1.06	NS	Providing and fixing Gunmetal branch pipe with 20mm dia nozzle conforming to IS:903. suitable for installation connections to hose coupling etc. as required.	Each	9.0		1745.00		15705.00
1.07		Providing and fixing Four way fire brigade connection housed in steel cabinet of size 900mm x 750mm x 400mm fabricated from 1.5mm thick M.S. sheet having lockable arrangement, openable glazed door with 4mm thick glass, including painting a coat of steel primer and two coats of postal red enamel paint, with necessary supports for the cabinet etc. with 150 mm dia. non return and butterfly valves complete in all respects.						
a)	NS	4 Way - 150mm dia	Each	1.0		11712.00		11712.00

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.08	NS	Providing and fixing Set of "Siamese" quadraplet instantaneous fire brigade connections comprising of two gunmetal instantaneous male inlet coupling 63mm dia with plug and cap, chain bends, tees etc for inlet to the static tank.	Each	1.0		14380.00		14380.00
1.09	NS	Providing & Fixing 150 mm dia, 4 way suction coupling for firebrigade withdrawal of water from the fire tank	Each	1.0		14380.00		14380.00
1.10	NS	Providing and fixing anodised glazed door shutter and frame of approved sections for Fire hose cabinet with dash fasteners (frame fabricated from 40 x 40 mm and shutter) 2100 mm high x 1200 mm wide x 600mm deep with locking arrangement, 4mm thick glass with beading including all accessories, complete as per drawing and as directed. The letters " HOSE CABINET" to be painted in red colour on the box complete in all respects.	Each	3.0		8500.00		25500.00
1.11	NS	Providing and fixing Weather proof standard stand post type hose cabinet (900mm x 750 mm x 400 mm) out door type made of 1.5mm thick M.S. sheet having central opening glazed door with 4mm thick glass suitable for accommodating hydrants, 2 Nos. canvas hose pipe and branch pipe including necessary locking arrangements, painting one coat of primer and two coats of postal red enamel paint.. The shutters are to be lockable type. The words " hose cabinet" to be painted on the box.	Each	6.0		3275.00		19650.00

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.12		Providing and fixing cast iron body IS: 210 FG 220 and double flange gear simple operation type butterfly valve conforming to IS: 13095 with SS304 disc and shaft NITNLE rubber replaceable seat of the following size complete with bolts, nuts, washers and rubber insertions as per specification.						
a)	NS	150 mm dia	Each	7.0		5828.00		40796.00
b)	NS	80 mm dia	Each	1.0		2565.00		2565.00
c)	NS	200 mm dia	Each	1.0		7200.00		7200.00
1.13	NS	Supplying, testing, installation & commissioning of pressure switches for pumps including necessary wiring upto the control panel.	Each	5.0		2014.00		10070.00
1.14	18.34	Constructing masonry chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 fine sand) for sluice valve, with C.I. surface box 100mm top diameter, 160mm bottom diameter and 180mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.						
	18.34.1	with F.P.S. bricks	Each	2.0	9021.30		18042.60	

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.15		Supplying and Fixing **First Aid Hose Reel**, wall mounting swinging type complete with drum & bracket of MS construction, spray painted in Post office Red, confirming to IS 884/1995 with upto date amendments, complete with the following as required.						
		36 Meter long 20 mm dia water hose Thermoplastic (Textile reinforced) Type - 2 as per IS : 12585						
		20 mm dia gun metal ball valve & nozzle.						
		Drum and brackets for fixing the equimpments on wall.						
	NS	Connection from riser with stop valve (gun metal) & M.S. Pipe	Each	3.0		6997.00		20991.00
1.16		Providing and fixing C.I. sluice valves (With cap) of approved quality complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) Class II						
a)	18.31.3.2	150 mm dia	Each	2.0		5200.40		10400.80
1.17	NS	Supply, Installation, Testing and Commissioning of 100 mm dia Bourden type, Stainless Steel dial type **Pressure Gauge** including brass isolation valve and siphon pipe having caliberation of 0 - 16 Kg / cm^{2}.	Each	8.0		1196.00		9568.00
1.18	NS	Supplying and Fixing of Fire Man's axe with heavy insulated rubber as per standard conforming to IS 926	Each	3.0		454.00		1362.00
1.19	NS	Supplying and Fixing vane type waterflow switch with contacts suitable for installation on 50 mm to 150 mm dia pipeline for a service pressure upto 20 Kg/sq.cm.	Each	5.0		3788.00		18940.00

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.20		Fabricating, Supplying, Installation, Testing and Commissioning **Air Vessel** of continuous welded construction with flanged discharge header on the top of each riser fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, Air Release Valve complete with suitable drain arrangement with 25 mm dia gun metal wheel valve complete with all accessories etc. as required of the following sizes						
a)	NS	1.2 Metre high and 250 mm dia	Each	1.0		9601.00		9601.00
1.21	NS	Supply, Installation, Testing and Commissioning **External Yard Hydrant Stand Post** comprising of GI pipe 80 mm dia (heavy duty C class) from existing ringmain to about 1 meter above ground level and Single Headed Yard Hydrant Valve with 80 mm dia flanged inlet, intantanneous gunmetal coupling of 63 mm dia with cast iron wheel ISI marked, conforming to IS : 5290 (Type A), with ABS cap and chain etc.complete with all accessroies as required.	Each	6.0		11500.00		69000.00
1.22	18.48	Providing and placing on terrace polyethylene water storage tank ISI : 12701 MARKED indicating the BIS license No 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.	Ltrs	10000.0	6.10		61000.00	
1.23	NS	Supply, erection, testing & commissioning of exit glow sign board of size 200mm x 350 mm wall mounting signage consisting of photo luminescent coating on acrylic cover	Each	6.0		1031.00		6186.00

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.24		Providing and fixing fire extinguisher of carbon dioxide type consisting of brand new high pressure steel cylinder bearing IS: 7285 mark and having the approval of controller of explosives Nagpur, wheel type valve bearing IS:3224/15683 mark internal discharge tube, 1 meter long high pressure discharge hose, non conducting horn, suspension bracket, fully charged bearing IS: making fixed to wall as directed.						
a)	NS	4.5kg capacity cylinder	Each	3.0		6900.00		20700.00
1.25	NS	Providing and fixing 9 liters capacity fire extinguisher water type gas pressure conforming to IS marking, fixed to wall.IS:15683	Each	3.0		1642.00		4926.00
1.26		Providing and fixing ABC type fire extinguishers complete in all respects. IS:15683 ISI marked						
a)	NS	Capacity 6.0 Kg.	Each	3.0		2200.00		6600.00
1.27	NS	Providing and fixing ABC type automatic modular ceiling mounted type extinguisher with body powder coated 10 lts. Capacity min. 300 mm dia 68 degree centigrade bul temperature complete in all respect of approved make and model	Each	1.0		8000.00		8000.00
1.28		Fabricating, Supplying, Installation, Testing and Commissioning **Air Vessel** of continuous welded construction with flanged discharge header in pump house fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, Air Release Valve, complete with drain arrangement with 25 mm dia gun metal wheel valve complete with all accessories etc. as required of the following sizes						
a)	NS	2 Metre high and 450 mm dia suitable to operate Jockey Pump, Main Fire Pump & Diesel Engine Driven Fire Pump	Each	1.0		24204.00		24204.00

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
1.29		Providing and fixing C.I. non-return valve complete with gunmetal seat, bolts, nuts washer & rubber insertions as required conforming to IS:5312.						
a)	NS	150 mm dia	Each	4.0		25500.00		102000.00
b)	NS	80 mm dia	Each	1.0		9700.00		9700.00
1.30		Providing & fixing puddle flanged including 40 cm long GI pipe piece welded / threaded with MS plates 450x450x6mm thick with both end screwed / flanged						
a)	NS	For 80 mm dia pipe	Each	2.0		1345.00		2690.00
b)	NS	for 150 mm dia pipe	Each	2.0		1986.00		3972.00
1.31		Supplying, installing, testing and commissioning of **electric motor driven type automatic pressurisation, pump set** suitable for automatic operation of **terrace down comer** and consisting of the following (as per CPWD specifications Part V-1985) for fire fighting and its amendmendts).						
a		Fire pump with stainless steel impeller CI casing, SS shaft shall be horizontal end suction centrifugally type having a capacity of **900 LPM** against a total head of **25m** so as to ensure a minimum pressure of 3.0 kg/sqm at the highest and farthest out at the specified flow complete with necessary strainer with foot valve in suction side and pressure gauge on the delivery side including bypass arrangement for periodic testing of the working of the pumping set as required. The pump shall be provided with mechamical seals.(Including taking necessary approval of complete fire fighting scheme from local fire authority before and after start of work) {Agency also has to submit characterstic curve of the pumps, model & other technical data for approval before placing the order}						

Item No	Ref. No.	Description Of Item	Unit	Total Qty.	DSR 2012 Rate(Rs)	Market Rate(Rs)	Amount DSR(Rs)	Amount Mkt(Rs)
1	2	3	4	5	6	7	8	9
b		Squirrel cage AC induction motor suitable fot operation of 415 V ,+/-10%, 3 phase 50 HZ, AC supply and of minimum 7.5 HP,1500 RPM for the above pump with flexible coupling as per spwcification and conforming to IS 325-1978 and shall be TEFC type only						
c		Common base plate fabricated from mild steel channel ot castiron type						
d		1 No. 3 Phase, fully automatic DOL starter, type - II of 10 HP with thermal overload relay, contactor, Timer, Push Buttons and Auto-manual selector switch etc complete as required.						
e	NS	Suitable cement concrete pump foundation with vibration damping arrangememnt with cushy foot mounting as required and having provision of suitable weather protection cover.	set	2.0		75872.00		151744.00
		Sub Total					**79042.60**	**1753845.80**
	Note: Based on the tender drawing the agency has to prepare the internal & external plumbing shop drawing and obtain the approval of the same before execution of work							
	End of Fire fighting BOQ							

SUMMARY OF COST ESTIMATE FOR ELECTRICAL WORKS OF 100 BED HOSPITAL			
S.No.	**DESCRIPTION**	**Amount In Figure (In Rs.)**	**Amount in Words (Rs.)**
1	**SUBHEAD 1: H.T. SUB STATION**	1480779	
2	**SUB HEAD 2: LT PANELS.**	853518	
3	**SUB HEAD 3 : DG SET & ACCESSORIES**	1860150	
4	**SUB HEAD 4 :MV PANELS**	102027	
5	**SUB HEAD- 5: MCB DISTRIBUTION BOARDS.**	221283	
6	**SUB HEAD 6: WIRING**	4551719	
7	**SUB HEAD: 7 - LIGHT FIXTURE AND FANS**	2216336	
8	**SUB HEAD 8 : FIRE DETECTION AND ALARM**	978810	
9	**SUB HEAD 9: LT CABLES**	795424	
10	**SUB HEAD 10: EARTHING SAFETY EQUIPMENT AND MISC. ITEMS**	583618	
11	**SUB HEAD 11: OUT DOOR LIGHTING**	353400	
	GRAND TOTAL FOR ALL ELECTRICAL WORKS	**13997064**	

BILL OF QUANTITY FOR ELECTRICAL WORKS OF 100 BED HOSPITAL- CHATTISGARH						
S.No.		**Description.**	**Unit.**	**Qty**	**Rate in Figures (in Rs.)**	**Amount in Rs.**
1		**2**	**3**	**4**	**5**	**6**
		SUBHEAD 1: H.T. SUB STATION				
1.00		**SUBSTATION EQUIPMENTS**				
1.01		**HT Panel :**				
		Supply, erection, testing and commissioning of 1 VCB panel Board with expandable type , 630 A ,11 kV, 3 Phase, 50 Hz., metal clad, dead front, 350 MVA rupturing capacity Vacuum Circuit Breaker Incoming & Outgoings as per the detailed specifications and drawings including connections etc. including door interlocking and suitable Power Pack as required.				
	A.	***1 No. VCB having following***				
		1 No. 630A, 11kV, 3 Phase, 50Hz., metal clad, dead front, 350 MVA rupturing capacity, Fully Drawout type, Vacuum Circuit Breaker (VCB)				
		1 set of 11kV/110V Potential Transformers with HRC fuses				
		1 Set of Phase indicating lamps with HRC fuses				
		1 No.Digital voltmeter .				
		1 set of indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY				
		Push button for ON, OFF,TRIP&TRIP circuit healthy				
		1 set of Suitable rating Current Transformer for metering and protection.				
		1 No.Digital Amps ammeter .				
		1 Set of CDG 61 (2 No. O/C, 1 No. E/F) relay				
		Digital Frequency meter.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		Trip circuit supervision relay,Auxiliary relays with shunt trip coil for Transformer protection				
		I No. Master Trip relay				
		1 No. Digital Power factor meter				
		Hooter or Auunciator				
		HT Panel as mentioned above	Set	1	500000	500000
		TRANSFORMER :				
1.02		Supply, erection, testing and commissioning of 400 **KVA**, 11/0.433 kV, 3 Phase, 4 wire, 50 Hz., ON-AN Transformer for out door duty with offload tap changer range -7.5%, 0, +5% in the steps of 2.5% per step , cable box connection at primary (HT side) and secondary end (LT side) shall be connected through cables, the transformer shall be complete with first filling of oil, with double float buchholz relay protection if required as per IS code, high winding temperature/oil temp. sensors, complete with all fittings and accessories, interconnection of control cables and accessories as per detailed technical specifications and as required.	Each	1	800000	800000
1.03		**H.T. CABLE**				
		Supply of following sizes of 11 kV grade multicore aluminium conductor XLPE armoured power cable as per IS : 7098.				
	i)	3 Core,185sq mm	Mtrs.	100	1068	106800
1.04		Laying of one number 3 core XLPE power cable of grade exceeding 1.1 KV but not exceeding 11KV of size exceeding 120 sqmm but not exceeding 185 Sqmm direct into ground including excavation, sand cushioning, protective covering and refilling the trench, supply of route marker complete as required.	Mtrs.	100	233	23300

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
1.05		Supplying and making end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size 3 Core, XLPE aluminium conductor cable of 11kV grade as required.				
	i)	185 sqmm Indoor type	Each	4	7569	30276
	ii)	185 sqmm Outdoor type	Each	2	10201	20403
		TOTAL FOR SUB HEAD 1: H.T. SUB STATION				**1480779**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD 2: LT PANELS.				
2.01		**L.T. PANEL: (NORMAL)**				
		Supply, installation, testing and commissioning of LT Panel, cubicle type, totally enclosed, free standing type, dust, powder coated, damp and vermin proof panel made up of CRCA sheet, complete with aluminium busbars, danger notice plate, interconnections with suitable capacity aluminum leads/solid aluminum strips/rods, necessary interlocking, and having incoming and outgoing switchgears with cable alley in front as mentioned below and complete as per technical specifications and as required. The size of cable alley shall be sufficient enough to accomodate the cable sizes. the panel should be as per techincal specifications and as required.				
		Note :				
		All relays to operate at 240 Volts, Single phase, 50Hz., AC.				
A.		**INCOMER:**				
	i)	***1No. MCCB Panels each having following:***				
		630 Amp 415 volts, 35 KA (Ics), TP+NL MCCB with variable current settings and having microprocessor based O/L, S/C & E/F protection release.				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		R, Y & B Phase indicating lamps (LED type) with 2A control SP MCBs				
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital Volt Metre with VSS				
		Digital energy metre with CT				
		One set of dual core dual ratio CT of 600-300/5-5A for capacitor panel.				
B.		**BUSBARS :**				
		800 Amps Phase TPN busbars of aluminium.				
C		**OUTGOING.**				
	i)	**2 Nos. MCCB as per following details/ specifications:**				
		250 Amp, 415 volts, TP+NL, 35 KA Moulded Case Circuit Breaker with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital energy metre with CT				
	ii)	**1 Nos. MCCB as per following details/ specifications:**				
		200 Amp, 415 volts, TP+NL, 35 KA Moulded Case Circuit Breaker with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital energy metre with CT				
	iii)	**2 Nos. MCCB as per following details/ specifications:**				
		160 Amp , 415 volts, TP+NL, 35 KA Moulded Case Circuit Breaker with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital energy metre with CT				
	iv)	**1 Nos. MCCB as per following details/ specifications:**				
		125 Amp 415 volts, 35 KA (Isc), TP+NL MCCB with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital energy metre with CT				
	v)	**1 Nos. MCCB as per following details/ specifications:**				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		100 Amp 415 volts, 35 KA (Isc), TP+NL MCCB with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital energy metre with CT				
	vi)	**3 Nos. 63 Amp MCCB as per following specifications:**				
		63 Amp 415 volts, 35 KA (Isc), TP+NL MCCB with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP for MCCB				
		Digital Ampere Metre of suitable range with suitable set of CT's and ASS.				
		Digital energy metre with CT				
	vii)	11 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
	viii)	8 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
	ix)	6 no. 25 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
E.		**ENCLOSURE :**				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	i)	Fabrication, PVC Sleeving, Control/Power Wiring and necessary electrical/ mechanical interlocking, UPS as mention above etc and any other item required for proper functioning of the panel complete as required.				
		MAIN LT PANEL AS MENTIONED ABOVE :	Set	1	565518	**565518**
2.04		**CAPACITOR PANEL**				
		Supply, installation, testing and commissioning of M.V. cubicle type totally enclosed free standing type, powder coated, dust, damp and vermin proof Capacitor Panel complete with busbars, M.V. danger notice plate, ammeter, ammeter selector switch, indicating lamps, CT's, Extra heavy duty, APP type Capacitors suitable for non linear loads upto 20%, operating losses not more than 0.5 W / KVAR, contactors suitable for capacitor switching (current limiting contactor circuit to suppress switching inrush current) interconnections with suitable capacity aluminium leads/solid aluminium strips, rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as required				
	A.	**INCOMER :**				
	i)	**1 Nos. 250Amp MCCB as per following specifications:**				
		250Amp 415 volts, 25 KA (Isc), FP MCCB with thermal magnetic release having variable current settings .				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should be with spreader link and phase barriers.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		Indicating lamps with 2A protection MCBs to indicate OPEN, CLOSE, TRIP.				
		R, Y & B Phase indicating lamps (LED type) with 2A control SP MCBs				
		Day & Night mode selector switch				
		10 steps Intelligent microprocessor based Automatic Power factor Correction relay having measurment sensitivity of 1 %.				
		Extension of incoming busbars for connection of multicore armoured aluminium cables.				
	B.	**METERING :**				
		1 set of digital Amp. Meter, Digital Power factor meter and Digital voltmeter				
	C.	**BUSBARS :**				
		500 Amp FP busbars of aluminum				
	D.	**OUTGOINGS :**				
	i)	**4 Nos . MCCB as per following details/ specification:**				
		63Amps, 415 volts, 25 KA, TP, MCCB with thermal magnetic release having variable current settings . Extended rotary operating mechanism with door interlock with defeat featureand padlock facility. MCCB should be with speader link and phase barriers.				
		63 Amps, 415 volts, 25 KA, TP, Power Contactor suitable for capacitive switching including current limiting contactor circuit to supress switching inrush current				
		ON / OFF delay timers for switching capacitor circuit.				
		"ON" and "OFF" LED indicating lamp and 2A control SP MCBs				
		Push button for CLOSE and TRIP				
		25 kVAR extra heavy duty APP type Capacitors suitable for non linear loads upto 20%, operating losses not more than 0.5 W per KVAR .				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	ii)	**2 Nos . MCCB as per following details/ specification:**				
		32 Amps, 415 volts, 25 KA, TP, MCCB with thermal magnetic release having variable current settings . Extended rotary operating mechanism with door interlock with defeat featureand padlock facility. MCCB should be with speader link and phase barriers.				
		32 Amps, 415 volts, 25 KA, TP, Power Contactor suitable for capacitive switching including current limiting contactor circuit to supress switching inrush current				
		ON / OFF delay timers for switching capacitor circuit.				
		"ON" and "OFF" LED indicating lamp and 2A control SP MCBs				
		Push button for CLOSE and TRIP				
		10 kVAR extra heavy duty APP type Capacitors suitable for non linear loads upto 20%, operating losses not more than 0.5 W per KVAR .				
		CAPACITOR PANEL AS MENTIONED ABOVE:	Set	1	288000	**288000**
		TOTAL SUBHEAD 2: MAIN LT PANEL.				**853518**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
3.00		**SUB HEAD 3 : DG SET & ACCESSORIES**				
		SOUND PROOF DG SETS				
3.01		**DG SET OF 100 KVA.**				
	a)	Supply, installation, testing and commissioning of sound proof (silent type) Diesel Generating set having 100 KVA Prime Power Ratings , 415 volt at 1500 RPM, 0.8 power factor suitable for 50 Hz, 3 phase system , suitable bhp, 0.85 load factor, water cooled raditor type diesel engine-alternator set mounted on common base frame, return fuel cooler, battery & battery charger, Anti Vibration mounting pads, Engine alternator safeties, electronic governor including all accessories & their wiring as per technical specification. This includes the following:				
	-	Supplying and fixing of suitable sizes High class MS pipe for DG exhaust complete with bends, elbow, flanges etc including silencer and catalytic convertor exhaust pipe for exhaust of DG sets including foundation of chimney etc. & supporting structure for each DG sestsas per pollution control board norms and as required.				
	-	Supply and fixing of 50mm thick compressed mineral wool insulation (Rock wool) for D.G. exhaust pipe with 22 gauge aluminium sheet cladding etc. as required for the under mentioned dia pipe.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	-	Supply, installation, testing and commissioning of suitable size fuel pipe for connecting diesel engine to individual day service tank including supply and fixing of required valves & filters etc. as required.				
	-	Fabrication of supports for exhaust pipe, fuel pipe or for any other purpose out of suitable M.S. structural steel including supplying and applying of enamel paint of approved shade after one coat of steel primer of reputed company.				
	-	Supplying and fixing of suitable capacity cable adapter box for alternator.				
	-	Providing and fixing oil tank of 990 litres capacity complete with suitable M.S. fabricated MS stand oil level indicator gauge tank and stand duly painted, complete with float switches etc. as required.				
	-	Factory assembled Sound proof Canopy as per pollution control board requirement to achieve noise level desired during night condition, with base frame, doors, inspection window, fresh air supply fans etc				
	-	Any other item required for completion of system above (D.G. set)	SET	1	1200000	1200000
	b)	Supply installation testing and commioning of AMF panel for 82.5 KVA DG SET with complete incomer, contactor relay and other neccecceasy items to complete the item.	SET	1	92400	92400

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
3.01		**DG SET OF 15 KVA (ICU)**				
	a	Supply, installation, testing and commissioning of sound proof (silent type) Diesel Generating set having 15 KVA Prime Power Ratings , 415 volt at 1500 RPM, 0.8 power factor suitable for 50 Hz, 3 phase system , suitable bhp, 0.85 load factor, water cooled raditor type diesel engine- alternator set mounted on common base frame, return fuel cooler, battery & battery charger, Anti Vibration mounting pads, Engine alternator safeties, electronic governor including all accessories & their wiring as per technical specification. This includes the following:				
	-	Supplying and fixing of suitable sizes High class MS pipe for DG exhaust complete with bends, elbow, flanges etc including silencer and catalytic convertor exhaust pipe for exhaust of DG sets including foundation of chimney etc. & supporting structure for each DG sestsas per pollution control board norms and as required.				
	-	Supply and fixing of 50mm thick compressed mineral wool insulation (Rock wool) for D.G. exhaust pipe with 22 gauge aluminium sheet cladding etc. as required for the under mentioned dia pipe.				
	-	Supply, installation, testing and commissioning of suitable size fuel pipe for connecting diesel engine to individual day service tank including supply and fixing of required valves & filters etc. as required.				
	-	Fabrication of supports for exhaust pipe, fuel pipe or for any other purpose out of suitable M.S. structural steel including supplying and applying of enamel paint of approved shade after one coat of steel primer of reputed company.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	-	Supplying and fixing of suitable capacity cable adapter box for alternator.				
	-	Factory assembled Sound proof Canopy as per pollution control board requirement to achieve noise level desired during night condition, with base frame, doors, inspection window, fresh air supply fans etc				
	-	Any other item required for completion of system above (D.G. set)	set	1	480000	480000
3.02	**b.**	**DG AMF PANEL**				
		Supply installation testing and commioning of AMF panel for 15 KVA DG SET with complete incomer, contactor relay and other neccecceasy items to complete the item.	set	1	87750	87750
		TOTAL SUB HEAD 3 : DG SET & ACCESSORIES				**1860150**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD 4 : MV PANELS				
4.00		Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, Free standing / wall mounted type, powder coated, dust, damp and vermin proof, indoor type Distribution Board / Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads / solid aluminium strips / rods, connection of incoming and outgoing cables with thimbles, and having following incoming and outgoing switchgears complete as required.				
4.01		**MV PANEL (OPD EMERGENGY):**				
	a)	**INCOMER:**				
		200 Amp 415 volts, 35 KA (Ics) FP MCCB with having thermal magnetic release with variable current settings				
		R,Y&B phase indicating lamp (LED type) with 2A control SP MCB				
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				
		1 No. 0 to 500 V Digital voltmeter with Voltage selector switch.				
		1 NoAmp Digital ammeter with selector switch with one set of C.Ts.				
	b)	**BUSBARS:**				
		300 Amp TPN Aluminium busbars				
	c)	**OUTGOING:**				
	i)	5 no. 63 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	iii)	4 no. 32 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
	iv)	4 no. 25 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
		MV PANEL (EMERGENCY) as mentioned above	Set	1	69407	69407
4.02		**MV PANEL (ICU EMERGENGY):**				
	a)	**INCOMER:**				
		63 Amp 415 volts, 35 KA (Ics) FP MCCB with having thermal magnetic release with variable current settings				
		R,Y&B phase indicating lamp (LED type) with 2A control SP MCB				
		Extended rotary operating mechanism with door interlocking with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.				
		1 No. 0 to 500 V Digital voltmeter with Voltage selector switch.				
		1 NoAmp Digital ammeter with selector switch with one set of C.Ts.				
	b)	**BUSBARS:**				
		100 Amp TPN Aluminium busbars				
	c)	**OUTGOING:**				
	i)	2 no. 40 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
	ii)	1 no. 25 Amps , 415 volts, 9 KA ,Four Pole, Miniature Circuit Breaker, with ON / OFF indication.				
		MV PANEL (EMERGENCY) as mentioned above	Set	1	32619	32619
		TOTAL SUB HEAD 4 : MV PANEL				**102027**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD- 5: MCB DISTRIBUTION BOARDS.				
5.00		**MCB DISTRIBUTION BOARD**				
5.01		Supplying & fixing following way, three pole and neutral sheet steel, MCB distribution board, 415 volts,on recess/surface complete with loose wire box, terminal blocks, tinned copper busbar, neutral link, earth bar,din bar, detachable gland plate, interconnections, phosphatized and powder coated including earthing etc. as per technical specifications and as required.(but without MCB & RCCB),				
	i	4 way (8+12), Double door	Each	6	2470	14820
	ii	6 way (8+18), Double door	Each	8	3100	24800
	iii	8 way (8+24), Double door	Each	8	3750	30000
	iv	12 way (8+36), Double door	Each	1	5495	5495
5.03		Supplying & fixing 6 Amps to 32 Amps rating, 240 volts,'B' series, miniature circuit breaker suitable for lighting & other loads of following poles in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications & as required.				
	i	Single pole	Each	333	141	46953
	iii	Triple pole & neutral (FP)	Each	10	723	7230
5.04		Supplying & fixing following rating, four pole,'B' Series 415 volts, Miniature Circuit Breaker (MCB),in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.				
	i	40 Amps	Each	12	1450	17400
	ii	63 Amps	Each	10	1760	17600

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
5.05		Supplying & fixing following rating, four pole, 415 volts,Residual Current Circuit Breaker (RCCB) having a sensitivity current upto 300 mA in the existing MCB DB complete with connections, testing & commissioning etc. as per technical specifications and as required.				
	i	40 Amps	Each	12	2290	27480
	ii	63 Amps	Each	10	2895	28950
5.06		Supplying and fixing Single pole Blanking plate in the existing MCB DB complete as required.	Each	111	5	555
		TOTAL SUB HEAD-5: MCB DISTRIBUTION BOARDS AS MENTIONED ABOVE:				**221283**
		SUB HEAD 6: WIRING				
6.00		**WIRING**				
6.01	i	Wiring for light point / fanpoint / exhaust fan point / call bell point with 1.5 sq.mm. PVC insulated, fire retardant low smoke (FRLS) copper conductor cable, single core / multi strand, in steel conduit (Including supplying & recess laying of MS conduit and accessories) including the following and complete as required.				
	ii	Supplying and Fixing Modular type switches (modular Bell push in case of call bell points) in suitable size modular metal boxes, base plate & modular cover plates, space for fixing electronic fan regulator in case of fan point wiring & space for fixing 5A socket on the board etc.				
	iii	Supplying and fixing Hexagonal fan Boxes with 3 mm thick hylem sheet covers in case of Fan Points				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	iv	Supplying & Fixing Ceiling Rose in case of Exhaust Fan Points etc.				
		Note :				
		i) Unless otherwise specified all the conduiting work to be done in recess				
		Point wiring as mentioned above	Point	900	1031	927630
6.02	**i**	Wiring for twin control light points with 1.5 sq.mm. PVC insulated, FRLS copper conductor cable in MS conduit (including supplying and recess laying of MS conduit) including the following and complete as required.				
	ii	Supplying and Fixing Modular type two numbers 2 Way switches in suitable size modular metal boxes, base plate & modular cover plates etc.				
		Note :				
		i) Unless otherwise specified all the conduiting work to be done in recess				
		Wiring for twin control light points as mentioned above	Point	10	1089	10890
6.03		Wiring for 5A light plugs with 1.5 sq.mm. PVC insulated, FRLS copper conductor cable including one number 1.5 sq.mm. PVC insulated, copper conductor cable for earthing in surface / recessed ISI marked MS conduit (including supply and recess laying of ISI marked MS conduit) as per technical specifications and as required.	Meter	2000	110	220000

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
6.04		Wiring for computer points (Three sockets & one switch) with 2.5 sq.mm. PVC insulated, FRLS copper conductor cable including one number 2.5 sq.mm. PVC insulated, copper conductor cable for earthing in surface / recessed MS conduit (including supply and recess laying of conduit) as per technical specifications and as required.	Meter	1260	218	274428
6.05		Wiring for Bed Power point (one 15/16 Amp switch and Three sockets 5/6 amp three pin) with 4 sq.mm. PVC insulated, FRLS copper conductor cable including one number 4 sq.mm. PVC insulated, copper conductor cable for earthing in surface / recessed MS conduit (including supply and recess laying of conduit) as per technical specifications and as required.	Meter	2000	328	655600
6.06		Wiring for 16 amp power plug with 2X4 sqmm PVC insulated, FRLS copper conductor, single core / multi strand cable in surface / recessed MS conduit (including supply and recess laying of MS conduit with all accessories) along with 4 sqmm PVC insulated, copper conductor, single core / multi strand cable for loop earthing etc per technical specifications & as required.				
		Directly from MCB-Distribution Board to the Socket Outlets	Meter	2400	328	786720
6.08		Wiring for 32 amp power plug with 2X6 sq.mm. PVC insulated FRLS copper conductor, multi strand cable in surface / recessed in MS conduit (including supply and recess laying of MS conduit with all accessories) along with 1X6 sqmm PVC insulated FRLS copper conductor for loop earthing, as per technical specifications & as required.	meter	520	438	227656

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
6.09		Wiring for circuit/ Submain wiring with following size of PVC insulated FRLS copper conductor single core/multi strand cable in recessed steel conduit (including supply & laying of recessed conduit) as required.				
	i)	2X2.5 Sqmm with 1 No. 2.5 sqmm PVC insulated FRLS copper conductor for earthing.	Metre	1500	198	297000
	ii)	2X4 Sqmm with 1 No. 4 sqmm PVC insulated FRLS copper conductor for earthing	Metre	110	228	25080
	iii)	2X10 Sqmm with 1 No. 10 sqmm PVC insulated FRLS copper conductor for earthing	Metre	70	398	27860
	v)	4X4 Sqmm with 2 No. 4 sqmm PVC insulated FRLS copper conductor for earthing	Metre	70	357	24990
	vi)	4X6 Sqmm with 2 No. 6 sqmm PVC insulated FRLS copper conductor for earthing	Metre	100	483	48300
	vii)	4X10 Sqmm with 2 No. 10 sqmm PVC insulated FRLS copper conductor for earthing	Metre	300	774	232200
	viii)	4X16 Sqmm with 2 nos 16 sq mm PVC insulated FRLS copper conductor for earthing.	Metre	475	1086	515850
6.10		Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing 3 pin 5/6 amps. modular socket outlet with shutters and 5/6 amps. modular type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required.	Each	100	340	34000
6.11		Supplying and fixing suitable module modular metal box on surface or in recess including providing and fixing 6 pin 15/16 A modular socket outlet with shutters and 15/16 A modular switch, base plate, modular cover plate, connections, etc. and all civil works complete as required.	Each	90	485	43650

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
6.12		Supply and fixing following 20 Amps, 240 volts, 2P+E, Industrial Socket Outlet (with plugs) in a metal box with 20 SP MCB in a sheet steel cover on surface or recess complete with all accessories including connections, testing and commissioning etc. as required.	Each	30	800	24000
6.13		Supply, Installation, Testing & Commisioning 63 Amps, TPN MCCB in a sheet steel enclosure,extended rotary operating mechanism complete with all accessories as required.	Each	4	7000	28000
6.14		Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing three nos 3 pin 5/6 amps. modular socket outlet with shutters and one no. 10 amps. modular type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. **(For computer Points)**	Each	63	855	53865
6.15		Supplying and fixing suitable Module metal box on surface or in recess including providing and fixing three nos 3 pin 5/6 amps. modular socket outlet with shutters and one no. 15 amps modular type switch, base plate, modular cover plate, connections etc. and all civil works 'complete as required. (**For Bed Points)**	Each	100	855	85500
6.16		Supplying, providing & fixing cordless musical bell, battries etc of approved make complete as required.	Each	5	800	4000
6.17		Supplying, providing & fixing electronic type call push button outside each ward of approved make complete as required.	Each	10	450	4500
		TOTAL SUBHEAD: 6- WIRING				**4551719**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD: 7 - LIGHT FIXTURE AND FANS				
7.00		**LIGHT FIXTURES AND FANS**				
7.01		Supply of following light fixture with high efficiency electronic/ dimmable ballast, starter, tubes/lamps, capacitor, reflector, diffuser, MS body/housing holder etc. complete with all fixing accessories as required.				
	i)	1X28 watt box type flourescent light fixture (Philips TMS 122M 1XTL5 28 W EBT or approved equivalent) (136b/136bw)	Each	300	1384	415200
	ii)	2X28 watt box type flourescent light fixture with reflector (Philips TMS 122M 2XTL5 28 W EBT or approved equivalent) (236b)	Each	20	1902	38040
	iii)	1X36 watt surface mounted type flourescent light fixture with opal acrylic diffuser (Philips TCS019 1XTL-D36W EBT or approved equivalent) (136AC1)	Each	16	1425	22800
	iv)	1X36 watt Surface/recessess mounted flourescent light fixture (Philips TCS 306 1XTL-D-36W HF EBE 136 or approved equivalent) 136SMO1	Each	140	2579	361060
	v)	2X36 watt Surface/recessess mounted flourescent light fixture (Philips TCS 306 2XTL-D-36W HF EBT 236 or approved equivalent) 236SMO1	Each	60	3066	183960
	vi)	2X TL5 28 watt surface mounted mirror optics flourscent light fixture (Philips TCS350 2X TL5 28W EBE C5 or approved equivalent). (236 SMO2)	Each	38	3337	126806

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	vii)	2X 36 watt recess mounted clean room flourscent light fixture with bottom opening and toughened glass (Philips FBS 670 2X36W TL-D FOP GT or approved equivalent). (236RMO2)(OT)	Each	16	9087	145392
	viii)	4 X 14 watt recess mounted clean room flourscent light fixture with bottom opening and clear arcylic cover (Philips TBS 651 4XTL5 -14 W- EB CR FOP GT or approved equivalent). (Sq fitting -OT)	Each	16	6873	109968
7.02		Supply of following compact flourescent light fixture with electronic ballast, starter, capacitor, yellow light lamps, reflector, diffuser, MS body / housing holder etc. complete with all fixing accessories as required.				
	i)	1x9 watt Bulk Head light fixture (Philips FXC 101 1XPL-S / 2P11 W ACO or approved equivalent) BH	Each	4	1092	4368
	ii)	1X10 W surfaced mounted down light fixture with frosted glass (DECON : PL-10W 03UW 01 approved equivalent)	Each	70	1012	70840
	iii)	2X18 watt sleek Mirror light with clear glass (Decon 05CA 01 or approved equivalent) (w toilet)	Each	40	1695	67800
	iv)	Surface mounted Batten holder (Plastic) with 13 watt CFL	Each	10	150	1500
	v)	1x11 W bedside fixture with 11 W CFL (Decon 05 GF or approved equivalent)	Each	100	1000	100000
	vi)	2 X 18 watt surface mounted down light forested glass (DECON:PL-2X18 W 03NB 01 or approved equivalent)	Each	10	1841	18410

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
7.03		Supply of following ceiling fans (Crompton Greaves High Breeze or approved equivalent) complete with double ball bearing, motor, blades, downrod, canopies, capacitor, modular type electronic fan regulator, suitable for operation on 230 volts, 50 Hz., 1 phase, AC supply complete as required				
	i	900 mm sweep	Each	5	2030	10150
	ii	1200 mm sweep	Each	165	2170	358050
7.04		Supply of 900 RPM, 300 mm (Crompton Greaves Trans Air or approved equivalent) exhaust fan suitable for single phase 230 volts, 50 Hz., AC supply complete with motor, louvers / shutters etc. complete as required.	Each	26	3442	89492
7.05		Supply of 450 mm sweep, crompton greaves model high flow 18" wall mounted fan complete with double ball bearing, motor, blades, capacitor etc suitable for single phase 230 volts, 50 Hz., AC supply, complete as required.	Each	2	1900	3800
7.06		Installation, testing and commissioning of prewired, flourescent fittings of all types, complete with all accessories and tube etc. directly on ceiling / wall, including connections with 1.5 sq.mm. PVC insulated, FRLS copper conductor, single core / multi strand cable etc. as required.	Each	570	75	42750

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
7.07		Installation, testing and commissioning of prewired, compact flourescent lamp fixture (CFL fxtures)of all types, complete with all accessories and lamp etc. directly on ceiling/wall, including connections with 1.5 sq.mm. PVC insulated, FRLS copper conductor, single core/ multi strand cable etc. as required.	Each	234	75	17550
7.07		Installation, testing and commissioning of ceiling fan and modular type electronic fan regulator(Electronic regulator to be fixed in switch board) including wiring the down rod and connection with 1.5 sqmm FR PVC insulated, copper conductor single core/multi strand cable including providing & fixing phenolic laminated sheet cover on the fan box, etc. as required.	Each	170	120	20400
7.09		Installation, testing and commossioning of exhaust fan up to 450 mm sweep in the opening, including making the hole to suit the size of the above fan including , fixing of louvers/ shutters with frame making good the damages etc. as required.	Each	26	300	7800
7.10		Installation, testing and commissioning of wall mounted fan up to 450 mm sweep including supply and fixing wall bracket arrangement complete as required.	Each	2	100	200
		TOTAL SUBHEAD 7 : LIGHT FIXTURE & FANS				**2216336**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD 8 : FIRE DETECTION AND ALARM				
8.00		**FIRE DETECTION AND ALARM SYSTEM**				
8.01		Supply and drawing of following sizes of PVC insulated FRLS copper conductor single core cable in surface / recessed MS conduit (including Supplying and fixing of MS Conduit) complete as required.				
	i	2X1.5 sqmm	Metre	2020	195	393900
8.02		Supply, installation, testing and commissioning of the following addressable type fire detection and alarm accessories as per technical specification & complete with connections etc. as required.				
	i	Optical type Smoke Detector	Each	120	3200	384000
	ii	Heat Detector	Each	4	3200	12800
	iii	Manual call point	Each	3	4500	13500
	iv	Fire Alarm Bell / Hooter of suitable range to cover the complete floor, in enclosure.	Each	3	1500	4500
	v	Response indicator	Each	72	130	9360

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
8.03		Supply, Installation, testing and commissioning of 2 loop microprocessor based addressable type networkable Fire Detection & Alarm Panel complete with inbuilt power supply, battery charger with SMF battries for minimum 24 hours back-up. The panel should have rectifier, loop card, minimum 80 character LCD unit to indicate fire/ fault signals with address provision for external/ internal printer port complete as per technical specifications and requirement of Local Fire Authority and as required.	Set	1	125000	125000
8.04		Supply testing and commissioning of isolator module as per specifications.	Set	7	3500	22750
8.05		Supply, Installation, testing and commissioning of addressable control modules.	Each	2	3500	7000
8.06		Supply, Installation, testing and commissioning of addressable monitor modules.	Each	2	3000	6000
		TOTAL SUB HEAD 8 : FIRE DETECTION AND ALARM				**978810**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD 9: LT CABLES				
9.00		**LT CABLES**				
9.01		Supply of following sizes of 1.1 kV grade multicore aluminum conductor armoured XLPE cable as per IS 7098.				
	i	3.5 Core 300 Sqmm.	Metre	300	1501	450300
	ii	3.5 Core 185 Sqmm.	Metre	40	681	27240
	iii	3.5 Core 120 Sqmm.	Metre	120	472	56640
	v	3.5 Core 35 Sqmm.	Metre	250	168	42000
	vi	3.5 Core 25 Sqmm.	Metre	160	139	22240
	vii	4 Core 16 Sq mm	Metre	50	114	5700
	viii	2 Core 10 Sq mm	Metre	200	79	15800
	ix	3 Core 4 Sq mm	Metre	100	69	6900
9.02		Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required				
	i	Size not exceeding 25 sq.mm	Metre	255	100	25500
	ii	Size exceeding 25 sq.mm but not exceeding 120 sq.mm	Metre	84	213	17892
	iii	Size exceeding 120 sq.mm but not exceeding 300 sq.mm	Metre	238	230	54740
9.03		Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade direct in the existing RCC/ Hume/Stoneware/Metal pipe as required				
	i	Size not exceeding 25 sq.mm	Metre	204	20	4080
	ii	Size exceeding 25 sq.mm but not exceeding 120 sq.mm	Metre	18	25	450
	iii	Size exceeding 120 sq.mm but not exceeding 300 sq.mm	Metre	51	44	2244
9.04		Laying of one number PVC insulated and PVC sheathed power cable 1.1kV grade on surface or on existing cable tray complete as required.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
	i	Size not exceeding 25 sq.mm	Metre	51	42	2142
	ii	Size exceeding 25 sq.mm but not exceeding 120 sq.mm	Metre	18	70	1260
	iii	Size exceeding 120 sq.mm but not exceeding 300 sq.mm	Metre	51	61	3111
9.05		Supplying and making end termination with suitable size Copper lugs including double compression glands of following sizes of 1.1. kv grade multicore aluminium conductor PVC insulated and PVC sheathed				
	i	3.5 Core 300 Sqmm.	Each	4	750	3000
	ii	3.5 Core 185 Sqmm.	Each	8	635	5080
	iii	3.5 Core 120 Sqmm.	Each	4	399	1595
	iv	3.5 Core 70 Sqmm.	Each	2	310	620
	v	3.5 Core 35 Sqmm.	Each	4	210	840
	vi	3.5 Core 25 Sqmm.	Each	4	133	530
	vii	4 Core 16 Sq mm	Each	4	130	520
	viii	2 Core 10 Sq mm	Each	24	150	3600
	ix	3 Core 4 Sq mm	Each	4	100	400
9.06		Fabricating and installing following size of perforated M.S. cable trays including horizontal and vertical bends, reducers, tees, cross members and other accessories as required and duly suspended from the ceiling with M.S. suspenders and including painting etc. as required :-				
	i	150 mm. width x 50 mm. depth x 1.6 mm. thickness	Metre	15	500	7500
	ii	300 mm. width x 62.5 mm. depth x 2.0 mm. thickness	Metre	15	800	12000
	iii	450 mm. width x 62.6 mm. depth x 2.0 mm. thickness	Metre	10	950	9500
	iv	600 mm. width x 62.6 mm. depth x 2.0 mm. thickness	Metre	10	1200	12000
		TOTAL SUB HEAD 9 : LT CABLES				**795424**

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		SUB HEAD 10: EARTHING SAFETY EQUIPMENT AND MISC. ITEMS				
10.00		**EARTHING, SAFETY EQUIPMENTS AND MISC. ITEMS**				
10.01		Earthing with copper plate 600mmX600mmX3mm thick including accessories, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal or coke and salt complete as required	Set	8	10000	80000
10.02		Earthing with GI plate 600mmX600mmX6mm thick including accessories, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc.with charcoal or coke and salt complete as required	Set	12	5000	60000
10.03		Supplying and laying 25mmX5mm GI strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	300	98	29400
10.04		Providing and fixing 25mmX5mm GI strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	100	120	12000
10.05		Supplying and laying 50mmX5mm Copper strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	150	756	113400
10.06		Providing and fixing 50mmX6mm Copper strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	60	1082	64920

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
10.07		Providing and fixing 25mmX5mm Copper strip on surface/on existing cable trench/RCC pipe/GI pipe or in recess for earth electrode as required.	Metre	20	766	15320
10.08		Supplying and laying 25mmX5mm Copper strip at 0.5m below ground level as strip earth electrode, including soldering etc. as required.	Metre	50	315	15750
10.09		Providing and laying of following sizes non pressure NP2 class (light duty) RCC pipe with colar joint with stiff mixture of cement (1 cement : 2 fine sand) including testing the joints etc. as required.				
	i	150mm dia	Metre	50	226	11300
	ii	300mm dia	Metre	50	426	21300
10.10		Providing and fixing M.V. danger notice plate of 200mmX150mm made of mild steel, atleast 2mm thick and vitreous enammelled white on both sides and with inscription in signal red colour on front side as required.	Each	12	68	816
10.11		Providing and fixing H.T. (11kV) danger notice plate of 250mmX150mm made of mild steel, atleast 2mm thick and vitreous enameled white on both sides and with inscription in signal red colour on front side as required.	Each	4	68	272
10.12		Supplying and laying of 12kV grade 1 metre wide anti skid chequered type rubber mat.	Metre	10	2500	25000
10.13		Supplying and laying of 1.1kV grade 1 metre wide anti skid chequered type rubber mat.	Metre	20	1800	36000

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
10.14		Design, manufacture, supply and installation of Fire Buckets 13 litre capacity 4 Nos. duly filled with sand and GI pipe support stand for these buckets including painting etc. complete as required.	Set	4	4500	18000
10.15		Supply and fixing shock treatment chart in English, Hindi and local language mounted on 5mm thick Plywood and 3mm thick plain glass front complete as required.	Set	2	1500	3000
10.16		Supplying and fixing Foam type 9 ltrs capacity fire extinguishers as approved by ISI complete as required.	Set	2	4800	9600
10.17		Supplying and fixing Dry Chemical powder type 10 Kg capacity fire extinguishers as approved by ISI complete as required.	Set	2	4200	8400
10.18		Supplying and fixing CO2 type 9 Kg capacity fire extinguishers as approved by ISI complete as required.	Set	2	11400	22800
10.19		Supplying and fixing CO2 type 4.5 Kg capacity fire extinguishers as approved by ISI complete as required.	Set	4	5310	21240
10.20		Supplying, storing, handling and fixing in position First Aid Medical Box complete as per technical specifications as required.	Each	1	3500	3500
10.21		Supply and testing of 11kV ISI marked hand gloves	Each	2	800	1600
10.22		Providing & fixing rigid PVCpipe complete with fittings, clamps including trenching & refilling/ wall cutting & plastering, etc. (for cable entry) with all minor civil & mech. Works complete as required.				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		100 mm dia nominal bore	Metre	50	200	10000
		TOTAL SUB HEAD 10: EARTHING, SAFETY EQUIPMENT AND MISC. ITEMS				**583618**
		SUB HEAD 11: OUT DOOR LIGHTING				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
11.00		**OUT DOOR LIGHTING**				
11.01		Supply, erection, testing and commissioning of external swaged steel tubular pole with following specifications & items :				
	i	9.0 Mtrs. high swaged steel tubular pole with arm length around 1.5 Metre, the construction of the pole shall be as per IS:2713 - 1980 410 SP-30 with base plate 450mmX450mmX6mm complete as per requirement with two coats of spray paints of approved shade.				
	ii	1X150 watts street light fixture with 150watts high pressure sodium vapour (HPSV) lamp complete with control gear, acrylic cover cover etc. similar to Philips SRP 051/ 150 W or approved equivalent including its wiring with 2X4 sq.mm. PVC insulated, FRLS copper conductor and 1.5 sqmm PVC insulated, FRLS copper earth wire from control box complete as required.				
	iii	Suitable size 32 A DP MS Control box with 2 no. incoming and outgoing terminals and 2 nos. tap-out terminal with 6A DP MCB complete as required - 1 Set				
	iv	Suitable number(s) 40mm dia Class-B GI Pipe(s) from above control box to upto 0.5 metre below ground level for power cable entry				
	v	Providing foundation including excavation, shuttering, alingment of poles, casting etc. including lean concrete at the bottom as per CPWD/ BIS specifications.				
	vi	The above installations shall be completed as CPWD specifications and as required				
	A.	Steet Tubular Poles(9M) Single Arm as mention above	Set	10	17900	179000
	B.	Steet Tubular Poles (9M) same as above but for Double Arm as mention above	Set	2	25800	51600

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
11.02		Supply, installation, testing and commissioning of external post top lantern with following accessories and complete as required :				
	i)	4m high (3.3m above ground) 80mm dia GI pole as approved, adopting socket at top for fixture mentioned below, base plate 300 x 300 x 6mm and provision for mounting junction box etc. - 1 set.				
	ii)	1 x 70 W Post top lantern with 70W HPSV lamp (Philips SPC 101 x SON 70 W E or equivalent) and its wiring with 2 x 2.5 sq.mm PVC insulated copper wire and 1.5 sqmm PVC insulated copper earth wire from control box				
	iii)	Suitable size 20A DP MS Control box with 2 no. incoming and outgoings terminals and 2 nos. tap-out terminal with 1 nos. 5A HRC fuses complete 1 set.				
	iv)	Suitable number(s) 40mm dia Class-B GI Pipe(s) from above control box to upto 0.5 metre below ground level for power cable entry				
	v)	Providing 400x400x1000mm deep 1:3:6 ratio cement concrete including excavation shuttering alignment of poles casting etc. including 100mm thick lean concrete shall be provided at the bottom				
		Supply, installation, testing and commissioning of external post top lantern as mentioned above	Set	8	6700	53600
11.03		Supply, installation, testing and commissioning of bollard lamps 1X18 watts CFL (Philips HCS360 1XPL-C/2P 18W GR Sonara bollard in gree color or equivalent) control box - 1 set.	Each	2	4000	8000
11.05		**Road Lighting Panel**				

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
		Supply, installation, testing and commissioning of following outdoor type with canopy, IP-54 protected M.V. cubicle type totally enclosed, free standing type, dust, damp and vermin proof, MV Panel, busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, stove enamelled painted and having following incoming and outgoing switchgears complete as required.				
		INCOMER:				
		1 No. 63 Amp 415 volts, TPN Switch Disconnector Fuse Unit with HRC Fuses				
		1 Set of phase indicating lamp with HRC fuses				
		1 Set of timer switch & 100A TP contactor with nuetral link (for street lights control) .				
		BUSBARS:				
		200 Amp TPN Aluminium busbars				
		OUTGOING:				
		10 Nos. 16 Amp 415 volts, DP MCB				
		Feeder Pillar as mention above	Set	1	20000	20000
	ii	1X250 watts street light fixture with 250 watts high pressure sodium vapour (HPSV) lamp complete with control gear, acrylic cover cover etc. similar to Philips SRP 051/ 150 W or approved equivalent including its wiring with 2X4 sq.mm. PVC insulated, FRLS copper conductor and 1.5 sqmm PVC insulated, FRLS copper earth wire from control box complete as required mounted on MS Pipe of suitable size on the building including its fixing arrangement as approved by Engineer .	Set	5	8000	40000

S.No.		Description.	Unit.	Qty	Rate in Figures (in Rs.)	Amount in Rs.
11.06		Spiral earthing made out of 6 SWG GI wire , 50mm Dia, 115 turns closely wound ,1.5 mtr below ground, earth pit of 350 Dia., 1.5 mtr depth including providing charcoal and salt for earthing at alternate layers of 300 mm depth (total 3 layers),connections etc. complete as required.	Set	4	300	1200
		TOTAL SUB HEAD 11: OUTDOOR LIGHTING				**353400**
		GRAND TOTAL FOR ALL ELECTRICAL WORKS				**13997064**
END OF BILL OF QUANTITY ELECTRICAL						

BILL OF QUANTITIES (B.O.Q.) FOR HVAC WORKS FOR "100 BEDDED HOSPITAL, CHHATTISGARH"					
ITEM No 1	**DESCRIPTION OF ITEM 2**	**QTY. 3**	**UNIT 4**	**RATE (Rs.) 5**	**AMOUNT (Rs.) 6**
1.0	Supplying, installation, testing and commissioning of 1**5 TR, programmable microprocessor based, Air-cooled Package Type DX units** complete with condensing unit, scroll compressor, air-cooled condenser with fan and evaporator,interconnecting refrigerant piping with indoor and outdoor units,pre charge refrigerant necessary insulation. Microprocessor Based Control Panel should be capable for Heating, Cooling & Humidification controls and interlocking with control wiring etc. complete with following and as per specifications and requirement.				
	Indoor Unit-for OT at Ground Floor				
	a) Fan Section and canvass connection (Double Skin Type) with mixing box and thermal break profile.				
	b) Backward curved Centrifugal Blower with Capacity of 3500 CFM and 125mm Static Pressure.				
	c) Cooling Coil Section/s with 15 TR cooling coil/s as per specifications.				
	d) Pre Filter with filter section as required.				
	e) Drain Pan and Drain Connection.				
	f) Drive motor, Drive arangement guard etc.				
	g) Necessary vibration isolator and supporting arrangements.				
	h) Fresh air intake arrangement, necessary water drain and air purge valve wherever required etc.				
	i) Canvass connection ,necessary foundations, 2 nos pressure gauge, 2nos thermometer etc				

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
	j) double skin section for housing fine(microvee) and Hepa filters as required complete as per specifications				
	Outdoor Unit for above				
	Suitable Air Cooled Type Condenser with Aluminium Fins & Copper Tube Coils for above indoor unit.				
	b) Scroll Type Hermetically sealed Comperssors.				
	c) Suitable condenser fans for the condensing unit.				
	d) necessary hard drawn copper refrigerant piping per circuit with kinnifoam insulation along with clamps,supports,fittings such as valves,y-strainer, bends,tees,reducers ,expansion valves etc complete as per specfications and requirement	1	Nos.	1800403	1800403
2.0	Supplying, installation, testing and commissioning of **Pan Type Humidifier** made from minimum 2mm thick stainless steel sheet top closed and insulated with 50mm thick expended polysterene (T.F. Quality) complete with incommining MCB, humidstate and control wiring for OTs.				
2.1	Capacity : 6 kW	1	Nos.	39480	39480
3.0	**WINTER/MONSOON HEATING ARRANGEMENT FOR OT AHU**				

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
	Supply, installation, testing & commissioning of winter/monsoon heating/reheating arrangements fixed in ducts/ plenums complete with strip heaters, fixing frame work, insulators, fire protection insulation in duct, controls such as heating thermostats, humidistats etc. The heaters banks shall be controlled by independent thermostats/ humidistats through electro magnetic type contactors and safety thermostats/ geyserstats as specified complete with wiring for intercinnections with 1.5 sq.mm copper conductor multi core armoured cable. The heater capacity shall be as per schedule of equipment and specifications, drawing etc.				
3.1	6 KW	1	Nos.	19805	19805
4.0	**DUCTABLE SPLIT TYPE A/C**				
	Supply, installation, testing and commissioning of ceiling mounted ductable split type air conditioners of following capacity complete with hermetically sealed compressor, fan section with fan & motor, air cooled condenser, filter section with filters,required no. of strip heaters with fixing arrangement in the plenum, interconnecting refrigerant piping with refrigerant & necessary electrical power cabling,control cabling, earthing, supports, controls,necessary safety measures and voltage stablizer & electrical panel,necessary fresh air intake arrangement,necessary GI drain piping of required size & required length from indoor unit to suitable drain location, complete in all respect as per specifications, drawing & technical schedule.				
4.1	17 TR capacity.	1	Nos.	445258	445258
	Extra Refrigerant Piping for 17 TR	25	Rmt.	1250	31250

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
	Extra drain piping	25	Rmt.	165	4125
5.0	**SPLIT AIR CONDITIONERS**				
	Supply , installation , testing and commisioning of HI wall split air conditioner comprising of the following.				
	a) Outdoor condensing Units				
	b) Indoor Evaporative Units				
	c) Interconnecting Refrigerant and drain piping with insulation wherever required, refrigerant and oil. The unit shall include refrigerant piping, power cabling and drain piping.				
	c) Safety and operational controls				
	e) Hiwall splits shall be suitable for single phase power supply and complete with suitable rating voltage stablizer.				
	f) Mounting arrangement and structural supports for outdoor unit are included.				
	g) The units should have 3 star rating from BEE.				
5.1	Capacity : 1.5 TR	1	Nos.	53189	53189
5.2	Capacity : 2.0 TR	6	Nos.	65092	390552
5.3	Extra Refrigerant Piping	70	Rmt.	350	24500
5.4	Extra drain piping	70	Rmt.	250	17500
6.0	**Window Air Conditioner**				
	Supply , installation , testing and commisioning of Window Acs complete with transformer, electrical cabling as required along with mounting arrangement and Voltage stablizer. Complete in all respect as per specifications. The units should have 3 star rating from BEE.				

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
	Capacity				
6.1	1.5 TR	2	Nos.	44967	89934
6.2	2.0 TR	1	Nos.	53132	53132
7.0	**Propeller Fans**				
	Supply, instalation, testing and commissioning of direct driven Propeller fan for exhaust air as shown in drawings. Each fan shall be complete with permanent split capacitor or shaded pole motor, mounting plate, accessories like wire guard, bird screen and fixed louvers for weather protection as required. Fan selection arrangement and Electrical characteristics shall be as follows:				
7.1	150 mm dia 900 RPM fan suitable for 220 +/- 10% volts, 50 Cycles, 1 Phase AC Supply	1	Nos	2700	2700
7.2	225 mm dia 900 RPM fan suitable for 220 +/- 10% volts, 50 Cycles, 1 Phase AC Supply	1	Nos	3200	3200
7.3	300 mm dia 900 RPM fan suitable for 220 +/- 10% volts, 50 Cycles, 1 Phase AC Supply	1	Nos	4500	4500
8.0	**GSS DUCTING**				
	Supply, installation, testing and balancing of G.S.S ducting of following thickness including necessary supports, hangers, nut bolts, gaskets, splitter dampers, vanes canvass connections etc. complete as per specifications & drawings:				
8.1	24 gauge	120	Sqm.	750	90000

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
8.2	22 gauge	90	Sqm.	884	79560
8.3	20 gauge	30	Sqm.	1068	32040
9.0	**ALUMINIUM DUCTING**				
	Supply, fabrication, installation and testing of aluminium ducts in accordance with the approved shop floor drawing and specifications. Material should confirm to IS 737 latest edition.				
9.1	22 gauge	70	Sqm.	877	61390
9.2	20 gauge	60	Sqm.	1044	62640
9.3	18 gauge	10	Sqm	1314	13140
10.0	**FIRE DAMPERS**				
10.1	Supply, installation, testing and commissioning of motorized combined smoke & fire dampers made out of GI sheet of at least 120 minutes fire rating complete with GI damper of required size, smoke sensor, etc as per specifications and shop drawings.	1	Sqm	9510	9510
10.2	Actuator & Control panels	2	Nos.	11887	23774
11.0	**CEILING DIFFUSERS**				
11.1	Supply, Installation, testing and balancing of square/circular supply air diffusers of powder coated extruded aluminium construction with attached volume control dampers as per specs. and drawings.	3	Sqm	9982	29946

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
11.2	Supply, installation, testing and balancing of square / circular return air diffusers of powder coated extruded aluminium construction without volume control dampers.	3	Sqm	7368	22104
12.0	**VOLUME CONTROL DAMPERS**				
	Supply, installation and testing of volume control dampers of GI sheet, box type to be provided in ducts complete with suitable links, levers and quadrants for manual control of air volume and air balancing as per specifications and drawings.	2	Sqm	5706	11412
13.0	**GRILLES**				
	Supply, installation, testing and balancing of supply / return air grilles with / without volume control dampers of powder coated extruded aluminium construction suitable for installation in walls, false ceiling boxing etc as per specifications and drawings.				
13.1	Supply air grilles in single louvers with volume control dampers.	1	Sqm	9388	9388
13.2	Return air grilles in single louvers without volume control dampers.	1	Sqm	5169	5169
14.0	**LAMINAR FLOW DIFFUSERS**				

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
14.1	Providing & fixing of stainless steel plenum duly reinforced and made 100% air tight complete with 55% free perforated grilles(18 Gauge SS) at bottom for laminar flow in OTs. The plenum shall be insulated with 15 mm closed cell polyethylene insulation & shall be manufactured & installed by specialised agency as per designed to be approved by customer / Consultant				
	Size: 1200 x 600	12	Nos.	13272	159261
14.2	Providing & fixing of aluminium powder coated grilles with 60% face area. The grill shall be complete with damper & complete 25 mm thick aluminium filters	1	Sqm	8000	8000
15.0	**DUCTING INSULATION**				
15.1	Supply and fixing of 15 mm thick foil faced FR Closed Cell Chemically Crossed Linked Poly Ethylene Foam insulation (fire retardant type) density not less than 33 Kg / CuM, 'K' value not more than 0.028 Kcal / degC with adhesive tape etc. on ducts complete for supply air ducting as per the specifications and approved shop drawings.	300	Sqm	449	134700
16.0	**DUCT ACOUSTIC LINING**				
	Supply,application and fixing of resin bonded fibre glass hard board acoustic insulation in supply air ducting / plenum covered with tissue paper and perforated aluminium sheet as specified.	20	Sqm	699	13980

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
17.0	Supply, installation, testing, commissioning and balancing of fresh air opening comprising of powder coated extruded aluminium louvers with bird screen, projection with frame and volume control damper with lever mounting arrangement etc. as per specifications and drawings.	1	Sqm	8300	8300
18.0	**AHU PANEL**				
	Supply, installation, testing and commissioning of cubicle type totally enclosed wall/floor mounted free standing type, dust, damp and vermin proof for AHU made of 2mm thick CRCA sheet steel in compartmentalized design as per specification and drawings. These distribution boards shall be mounted on 50x50x6 MS angle frame work grouted to floor/walls of recessed. The rate includes the angle iron frame, support, painting, numbering, earthing etc. as required				
18.1	**AHU STARTER PANEL**				
	INCOMER :				
	1 No. 100 Amps 25 KA FP MCCB, 1 no of 0-125 amp ammeter with selector switch & CT's , 1 no. 0-500 volt voltmeter with selector switch & fuses , 1set of indicating lights (RYB).				
	Bus Bar				
	100 A TPN Aluminium bus bar 415V , 50 Hz.				
	OUTGOINGS :				

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
	1 set - 63 A, 415 V 15 KA FP MCCB, single phase preventor, suitable starter for 7.5/10 HP motor with thermal overload protection and spare NO-NC contacts for interlocking, ON-OFF indication lamps with push button for AHU motor as required.				
	1 set - 63 A, 415 V 15 KA FP MCCB, contactors of suitable rating for each bank , ON-OFF indication lamps for winter humidifier .				
	1 set - 63 A, 415 V 15 KA FP MCCB, contactors of suitable rating for each bank , ON-OFF indication lamps for winter heating.				
	1 set - 32 A, 415 V 15 KA FP MCCB , as spares.				
	1 set - 16 A, 415 V 10 KA FP MCCB .				
	Complete panel as above	1	Panel	90000	90000
19.0	**CABLING**				
	Supplying, laying, effecting proper connections, testing & commissioning of following size of 1.1 kv PVC insulated aluminium conducting armoured cables along with necessary cable tray as per IS 1554 Part- 1 laid on surface of wall/ceiling etc. & termination with brass compression glands as required.				
19.1	3 C X4 sq. mm. Cable	50	Rmt	88	4400
19.2	4 C X10 sq. mm. Cable	50	Rmt	133	6650
19.3	4 C X16 sq. mm. Cable	30	Rmt	147	4410
19.4	3.5 X35 sq.mm Cable	60	Rmt	325	19500

ITEM No 1	DESCRIPTION OF ITEM 2	QTY. 3	UNIT 4	RATE (Rs.) 5	AMOUNT (Rs.) 6
20.0	Supply & installation of following sizes of perforated MS cable trays including horizontal & vertical bends, reducers, tees, cross members and other accessories as required and duly supported from the ceiling/wall/floor with MS suspenders/supports and including painting etc. as required				
20.1	150 mm widthx50 mm deep x1.6 mmthickness	20	Rmt	300	6000
20.2	100 mm widthx50 mm deep x1.6 mmthickness	25	Rmt	180	4500
21.0	**EARTHING**				
21.1	Earth pits with GI earth plate of size 600mmx600mmx6mm thick including all accessories , down watering GI pipes 40mm dia and providing masonry enclosure with cover plate having interlocking arrangement and watering pipe etc. with charcoal of or coke and salt) complete as required	1	Set	7500	7500
21.2	Providing and fixing **GI earth strip** on walls/ trenches complete as per specifications and as required.				
21.2.1	25mm x 3mm	50	Rmt	150	7500
22.0	Providing and fixing **earth wire** of complete as per specifications as required.				
22.2	8 SWG wire	100	Rmt	45	4500
	TOTAL				**3908802**

	BILL OF QUANTITY				
	OPERATION THEATRE (Major)				
A	**Supply Installaton Testing and Commissioning of Operation Theatre (Major) and One year defect liability period for Chattisgarh**				
SL. NO.	**ITEM DESCRIPTION**	**UNIT**	**QTY**	**MARKET RATE (Rs.)**	**AMOUNT (Rs.)**
1	**Ceiling System**	lot	1	375000	**375000**
	40 mm thick Double skin totally flush Walkable false ceiling panels made with 0.8 mm thick Galvanised Powder coated Skin Pass (GPSP) sheet on both side with 36 ± 2 kg/m³ density PUF as infill, with suitable Ceiling grid and supporting hardware. Joints shall be sealed with cleanroom compatible silicon sealant. Panel will be class "0", fire rated.Factory made cutout - 12 Nos. (Approx.) in the ceiling panel for light fixture Details as per technical specification.				
2	**Wall with Corner Coving**	lot	1	150,000	**150000**
	Epoxy painting and Extruded aluminium powder coated/Anodized clip on type covings for the entire wall to wall and wall to ceiling. R-70 , 3D internal/ external corner coves Details as per technical specification.				
3	**Swing door**	Nos	1	195,000	**195000**
	44 mm thick doors made with Poly Urethene painted 0.8mm thick GPSP sheets on both sides with PUF as infill, 1.2 mm thick GPSP powder coated door frames totally flush with the wall panels, hardware like push plates, handles, door closure, double glazed view glass of std size, Stainless Steel Ball Bearing butt hinges and provision for concealed automatic door bottom Drop seal etc. Supply & Installation of double glazed view panels with flush design, with 6mm thick float glass fixed in double panel with necessary arrangements Details as per technical specification..				
4	**Peripheral Light**	Nos	12	15,000	**180000**

	Peripheral lights and clean room luminaries fitted in the frame should be 12 in numbers for each OT. The fluorescent lamps 54 W 16mm Ø- 3 nos with highly spectacular anodized Aluminum reflectors and optical antiglare system for adjustable light distribution. Details as per technical specification.				
5	**OT Control Panel**	Nos	1	234,000	**234000**
	Tile based Membrance type Operation Theatre Surgeon Control Panel (6 service Tiles) consisting of display like Real time, Count down time, lighting control through dimmer, Telephone, Gas pressure set point, Alarm, Room Temperature and Relative Humidity.mounted flush in the theatre wall with Distribution Board complete with all accessories etc. (size 650mm x 650mm). Lighting Control along with i. Day time clock -Digital , ii. Elapsed Time Clock -Digital details as per technical specification.				
6	**X-Ray Film Viewer**	Nos	1	62,300	**62300**
	The two (2)-plate viewing with 3 pieces of high frequency fluorescent lamps X-Ray Viewing Screen should be designed to provide flicker free luminance for clear film viewing. Each plate should be able to illuminate films upto 14”x17” size and complete as required with all accessories as per technical specification.				
7	**Writing Board**	Nos	1	17,100	**17100**
	Writing Board as operating list Board of size-1000x700x60deep should be made of ceramic having magnetic properties and should be flushed to the wall of the operating Room and complete as required with all accessories as per technical specification..				
8	**Built-in Storage Unit**	Nos	1	61,500	**61500**
	Storage Unit should be made out of 1.50 mm thick AISI-304 Stainless steel. The storage unit should be divided 2 or more parts and each part should have individual glass doors with high quality locking system and complete as required with all accessories as per technical specification...				
9	**Distribution Board and Electrical wiring, conduiting with fixture inside the Operation theatre**	lot	1	180000	**180000**

	All high voltage equipment should be installed in a separate enclosure. AndLaying of PVC conduits, Modular Switch Boxes, Modular Switches-sockets, Power and Light wiring including Earthing wire for all the lighting controls, Pendant and other equipment fixtures and fittings inside the theatre Wiring with low leakage current wires of FRLS wires should be as per requirements and complete as required with all accessories as per technical specification.				
10	**Operation Theatre Flooring (Antistatic Conductive Flooring)**	lot	1	199000	**199000**
	A floor should be provided, flat to within a tolerance of +/- 3mm over any 3-metre area. Onto this sub floor, a self-leveling compound should be laid prior to lying of the floor finish and complete as required with all accessories as per technical specification.				
11	**Ceiling Mounted Pendant Anaesthetic Pendant (Single Arm)**	Nos	1	175,000	**175000**
	Supply installation and commissioning of Single Arm Movable Type with 1000 mm long arm with Horizontal Movement and complete as required with all accessories as per technical specification. .				
12	**Ceiling Mounted Surgeon Pendant-Double Arm Pendant**	Nos.	1	220,000	**220000**
	Supply installation and commissioning of Double arm Surgeon Pendant complete as required with all accessories as per technical specification. .				
13	**Ceiling OT Light**	Nos	1	1,125,000	**1125000**
	Dual Dome LED Surgical Lighting System with one dedicated Spring-Arm Suspension and complete as required with all accessories as per technical specification.				
In words Rupees					**3173900**

BILL OF QUANTITY

OPERATION THEATRE (Minor)

B **Supply Installaton Testing and Commissioning of Operation Theatre and One year defect liability period for Chattisgarh**

SL. NO.	ITEM DESCRIPTION	UNIT	QTY	MARKET RATE (Rs.) (In Figure)	AMOUNT (Rs.)
1	**Ceiling System**	lot	1	375000	**375000**
	40 mm thick Double skin totally flush Walkable false ceiling panels made with 0.8 mm thick Galvanised Powder coated Skin Pass (GPSP) sheet on both side with 36 ± 2 kg/m³ density PUF as infill, with suitable Ceiling grid and supporting hardware. Joints shall be sealed with cleanroom compatible silicon sealant. Panel will be class "0", fire rated.Factory made cutout - 12 Nos. (Approx.) in the ceiling panel for light fixture Details as per technical specification.				
2	**Wall with Corner Coving**	lot	1	105,000	**105000**
	PU painting and Extruded aluminium powder coated/Anodized clip on type covings for the entire wall to wall and wall to ceiling. R-70 , 3D internal/ external corner coves Details as per technical specification.				
3	**Swing door**	Nos	1	195,000	**195000**
	44 mm thick doors made with Poly Urethene painted 0.8mm thick GPSP sheets on both sides with PUF as infill, 1.2 mm thick GPSP powder coated door frames totally flush with the wall panels, hardware like push plates, handles, door closure, double glazed view glass of std size, Stainless Steel Ball Bearing butt hinges and provision for concealed automatic door bottom Drop seal etc. Supply & Installation of double glazed view panels with flush design, with 6mm thick float glass fixed in double panel with necessary arrangements. Details as per technical specification.				
4	**Peripheral Light**	Nos	12	15,000	**180000**
	Peripheral lights and clean room luminaries fitted in the frame should be 12 in numbers for each OT. The fluorescent lamps 54 W 16mm Ø- 3 nos with highly spectacular anodized Aluminum reflectors and optical antiglare system for adjustable light distribution. Details as per technical specification.				

	ii. Elapsed Time Clock -Digital				**0**
5	**X-Ray Film Viewer**	Nos	1	62,300	**62300**
	The two (2)-plate viewing with 3 pieces of high frequency fluorescent lamps X-Ray Viewing Screen should be designed to provide flicker free luminance for clear film viewing. Each plate should be able to illuminate films upto 14"x17" size and complete as required with all accessories as per technical specification.				
6	**Built-in Storage Unit**	Nos	1	61,500	**61500**
	Storage Unit should be made out of 1.50 mm thick AISI-304 Stainless steel. The storage unit should be divided 2 or more parts and each part should have individual glass doors with high quality locking system and complete as required with all accessories as per technical specification...				
7	**Distribution Board and Electrical wiring, conduiting with fixture inside the Operation theatre**	lot	1	125000	**125000**
	Electrical Distribution Board along with all high voltage equipment should be installed in a separate enclosure. AndLaying of PVC conduits, Modular Switch Boxes, Modular Switches-sockets, Power and Light wiring including Earthing wire for all the lighting controls and other equipment fixtures and fittings inside the theatre Wiring with low leakage current wires of FRLS wires should be as per requirements and complete as required with all accessories as per technical specification.				
8	**Operation Theatre Flooring (Antistatic Conductive Flooring)**	lot	1	199000	**199000**
	A floor should be provided, flat to within a tolerance of +/- 3mm over any 3-metre area. Onto this sub floor, a self-leveling compound should be laid prior to lying of the floor finish and complete as required with all accessories as per technical specification.				
9	**Ceiling OT Light**	Nos	1	525,000	**525000**
	Surgical Lighting System with the dual reflector complete as required with all accessories as per technical specification.				
In words Rupees					**1827800**
	Grand Total -OT				**5001700**