

HSCC (India) Limited
as Executing Agency on behalf of
MINISTRY OF HEALTH & FAMILY WELFARE,
Government of India, New Delhi

Dated: 13.07.2017

AMENDMENT No. – 4

Project Name: Tender for “Construction of Residential Complex & OPD Block at All India Institute of Medical Sciences, Kalyani (WB)”.

Tender No. HSCC/PMSSY/AIIMS/ Kalyani/R-OPD/2017, dated: 16.06.2017

With reference to the subject work, the following amendments may be noted which shall be treated as a part of the contract and shall be uploaded along with the tender/bid by the bidders :

1. In Vol.-V (Bill of Quantities) – Civil Works, the quantity and amount of Item no.1.03 & 1.06 has been amended & also item no.1.07 and 1.08 has been added.

Accordingly, the Amended BOQ (Bill of Quantities) – Volume V has been uploaded on the HSCC e-tender portal <http://www.tenderwizard.com/HSCC>.

Bidders are advised to use the Amended BOQ Volume-V only while uploading their bids.

2. The bidders may note that the estimated cost of the works stands revised to **Rs.317.03 crores** and the bid security/Earnest Money Deposit to be deposited by the bidders stands amended to **Rs.3.27 crores**.

Accordingly, the bidders may note that wherever mentioned,

- i. the Estimated Cost may be read as **Rs.317.03 crores** in lieu of Rs.313.56 crores
- ii. the bid Security Amount may be read as **Rs.3.27 crores** in lieu of Rs.3.24 crores.

3. The bidders may also note the following amendments to be read and construed with the previous amendments already issued:

Clause Ref.	Existing Provision	May be read as
Clause 1.a. Volume I Page 3 Information and Instructions.....	Three similar works each costing not less than <u>Rs.125.43 Crores</u> or two similar works each costing not less than <u>Rs.188.14 Crores</u> or one similar work costing not less than <u>Rs.250.85 Crores</u>	Three similar works each costing not less than Rs.126.81 Crores or two similar works each costing not less than Rs.190.21 Crores or one similar work costing not less than Rs.253.62 Crores

Clause Ref.	Existing Provision	May be read as
Clause 1.b. Volume I Page 3 Information and Instructions.....	Should have had average annual financial turnover of <u>Rs.156.78 Crore</u> on construction works during the last three years ending 31st March 2016 (Scanned copy of Certificate from CA to be uploaded).	Should have had average annual financial turnover of Rs.158.51 Crore on construction works during the last three years ending 31st March 2016 (Scanned copy of Certificate from CA to be uploaded).
Clause 1.d. Volume I Page 4 Information and Instructions.....	Should have a solvency of <u>Rs.125.43 Crore</u> (Scanned copy of original solvency to be uploaded).	Should have a solvency of Rs.126.81 Crore (Scanned copy of original solvency to be uploaded).
Clause 1.4.1.(b) (i) Volume I Page 10 Notice Inviting Bids	Experience of having successfully completed works during the last 7 years ending previous day of last date of submission of tenders Three similar completed works each costing not less than the amount equal to <u>Rs.125.43 Crore</u> (amount in Rupees of 40% of the estimated cost). or Two similar completed works each costing not less than the amount equal to <u>Rs.188.14 Crore</u> (amount in Rupees of 60% of the estimated cost). or One similar completed work of costing not less than the amount equal to <u>Rs.250.85 Crore</u> (amount in Rupees of 80% of the estimated cost).	Experience of having successfully completed works during the last 7 years ending previous day of last date of submission of tenders Three similar completed works each costing not less than the amount equal to Rs.126.81 Crores (amount in Rupees of 40% of the estimated cost). or Two similar completed works each costing not less than the amount equal to Rs.190.21 Crores (amount in Rupees of 60% of the estimated cost). or One similar completed work of costing not less than the amount equal to Rs.253.62 Crores (amount in Rupees of 80% of the estimated cost).
Clause 1.9 Volume I Page 12 Notice Inviting Bids	Bid shall be accompanied with Earnest money of <u>Rs. 3.24 Crores</u> in shape of.....	Bid shall be accompanied with Earnest money of Rs. 3.27 Crores in shape of.....

This amendment shall form integral part of bid document and should be submitted along with the bid. All other terms & Conditions of the Tender shall remain unchanged.

Prospective bidders are advised to regularly scan through HSCC e-tender portal <http://www.tenderwizard.com/HSCC> and <http://www.hsccltd.co.in> as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

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Chief General Manager,
HSCC (India) Ltd.,

**HSCC (India) Limited
as Executing Agency on behalf of
MINISTRY OF HEALTH & FAMILY WELFARE,
NEW DELHI**

TENDER

**FOR
Construction of Residential Complex &
OPD Block
at
All India Institute of Medical Sciences
Kalyani (West Bengal)**

under

**Pradhan Mantri Swasthya Suraksha Yojana
(PMSSY)**

VOLUME – V

Amended BOQ

July' 2017

Executing Agency



HSCC (INDIA) LTD.

E-6(A), sector-1, NOIDA(U.P) 201301 (India)

Phone : 0120-2542436-40

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Tender No. HSCC/PMSSY/AIIMS/Kalyani/R-OPD/2017

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.						
a)	All kinds of soil	95202.00	Cum	125.95		11990691.90	
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 upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 500 m.						
a)	All kinds of soil.	1199.00	Cum	166.40		199513.60	
b)	Ordinary rock	391.00	Cum	275.85		107857.35	
c)	Hard rock (blasting prohibited)	265.00	Cum	656.70		174025.50	
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 500 m and all lifts.	107712.00	Cum	125.75		13544784.00	
1.04	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials.						
a)	All kinds of soil.	42861.00	Cum	51.75		2218056.75	
1.05	Supplying and filling in plinth with sand (zone V) under floors, including watering, ramming, consolidating and dressing complete.	1398.00	Cum	917.75		1283014.50	
1.06	Supplying and stacking of good earth at site including royalty and carriage up to 1 Km (earth measured in stacks will be reduced by 20% for pavement).	52000.00	Cum	332.55		17292600.00	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
1.07	Supply and stacking of Fly ash conforming to IRC- 58 at site, including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	49000.00	Cum	129.80		6360200.00	
1.08	Filling with available fly ash and earth (excluding rock) in trenches or embankment in layers (each layer should not exceed 15 cm), with intermediate layer of compacted earth (Soil density of 98%) after every four layers of compacted depth of fly ash, sides & top layer of filling shall be done with earth having total minimum compacted thickness 30 cm or as decided by Engineer -in-charge, including compacting each layer by rolling/ ramming and watering, all complete as per drawing and direction of Engineer -in - charge.	49000.00	Cum	125.75		6161750.00	
Total of sub-head						59332493.60	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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 (zone-III) : 4 graded stone aggregate 20 mm nominal size).	12.00	Cum	5481.95		65783.40	
b)	1:4:8 (1 Cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size)	2062.00	Cum	4478.15		9233945.30	
c)	1:5:10 (1 cement : 5 coarse sand (zone-III): 10 graded stone aggregate 40 mm nominal size).	1164.00	Cum	4209.05		4899334.20	
	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size).	203.00	Cum	3959.70		803819.10	
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,sunken floor 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).	103.00	Cum	6547.70		674413.10	
2.03	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III): 4 graded stone aggregate 12.5mm nominal size).	1087.00	Sqm	263.10		285989.70	
2.04	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification	283.00	per 50 kg cement	47.95		13569.85	
2.05	Providing & 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.	1072.00	Sqm	91.90		98516.80	
2.06	Extra for concrete work in superstructure above floor V level for each four floors or part thereof.	715.00	Cum	641.15		458422.25	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
2.07	Extra for laying concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	614.00	Cum per Meter Depth	474.50		291343.00	
Total of sub-head						16825136.70	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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.	14107.00	Cum	6446.45		90940070.15	
b)	All works above plinth level upto floor V level.	31307.00	Cum	7250.05		226977315.35	
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 settingof concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge						
	NOTE- (1) Cement content considered in this item is @ 330 kg/cum.Excess/ less cement used as per design mix is payable/ recoverable separately.“ (2) Fly ash conforming to grade I of IS 3812 (Part-1) only be used as part replacement of OPC as per IS : 456. Uniform blending with cement to be ensured in accordance with clauses 5.2 and 5.2.1 of IS:456 -2000 in the items of BMC and RMC.						
a)	All works up to Plinth level.	1486.00	Cum	6691.85		9944089.10	
b)	All works above plinth & up to floor V level.	3470.00	Cum	7495.40		26009038.00	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
	Note :- The above item shall be used judiciously where specified quality of Fly Ash is available for mixing in concrete. Also, the guidelines issued by CDO, CPWD, vide circular no. CDO/SE(RR)/Fly Ash (Main)/102 dated 9th April 2009 shall be followed in such cases.						
3.03	Extra for providing richer mixes at all floor levels.						
	Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.						
a)	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @340 kg/m3).	3952.00	Cum	69.50		274664.00	
b)	Providing M-35 grade concrete instead of M-25 grade BMC/ RMC. (Note : Cement content considered in M-35 is @ 350 kg/ cum)	20326.00	Cum	138.95		2824297.70	
3.04	Centering and shuttering including strutting, propping etc. and removal of form for all heights :						
a)	Foundations, footings, bases of columns, etc. for mass concrete	17822.00	Sam	193.95		3456576.90	
b)	Walls (any thickness) including attached pilasters, butteresses,plinth and string courses etc.	45624.00	Sqm	378.60		17273246.40	
c)	Suspended floors, roofs, landings, balconies and access platform	77306.00	Sam	422.30		32646323.80	
d)	Shelves (Cast in situ)	210.00	Sam	422.30		88683.00	
e)	Lintels, beams, plinth beams, girders, bressumers and cantilevers	77089.00	Sam	342.90		26433818.10	
f)	Columns, Pillars, Piers, Abutments, Posts and Struts	60040.00	Sam	467.85		28089714.00	
g)	Stairs, (excluding landings) except spiral-staircases	5806.00	Sam	419.35		2434746.10	
h)	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards	1964.00	sqm	627.85		1233097.40	
i)	Extra for shuttering in circular work (20% of respective centering and shuttering items)	1582.00	Sam	93.57		148027.74	
j)	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	30.00	Sam	193.95		5818.50	
k)	Edges of slabs and breaks in floors and walls						
i)	Under 20 cm wide	7316.00	Metre	122.20		894015.20	
l)	Weather shade, Chajjas, corbels etc., including edges	3621.00	Sam	521.75		1889256.75	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities

Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
3.05	Extra for specially designed shuttering to support slab/ beam of Linac having thickness 0.6 mtr and above as per drawing wall including designing of shuttering and getting vetting from IIT, to support desired weight of slab/beam, etc all complete to the satisfaction of engineer in charge.	2892.00	Sqm		2613.00		7556796.00
3.06	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, landing, beams and balconies (Plan area to be measured)	34974.00	Sqm	171.50		5998041.00	
3.07	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete at all levels.						
a)	Thermo-Mechanically Treated bars.	8081554.00	kg	56.60		457415956.40	
3.08	Add for using extra cement in the items of design mix over and above the specified cement content therein.	5809.00	Quintal	672.75		3908004.75	
3.09	Extra for R.C.C./ B.M.C/ R.M.C. work above floor V level for each four floors or part thereof.	19227.00	Cum	232.30		4466432.10	
3.10	Extra for laying reinforced cement concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	2094.00	Cum per Meter Depth	474.50		993603.00	
3.11	Post Tensioned Steel						
	Providing, cutting, fixing grouting high tensile steel reinforcement strands including all accessories complete in all respect 5-5 and 5-4 or as per design tendon units comprising 13 mm diameter, class 2 conforming to IS: 14268:1995 low relaxation strands with a tensile strength of 1860 N/mm ²						
	Providing and Laying Corrugated flat duct of size 75mmX20mm or as per design						
	Providing and fixing Stressing /Dead anchorage suitable for 5-5 and 5-4 or as per design tendons including Stressing of Tendons						

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
	Note: The Rate shall also include for designing of Post tensioned steel, bursting reinforcement, pressure plates, any additional bars around anchorages, recess formers, spacers, cement grout with admixture marking with paint and epoxy grout. The weight of strands provided shall be measured for pavement	82.00	Tonne		155011.00		12710902.00
3.12	Providing and fixing of expansion joint system related with floor location as per drawings and direction of Engineer-In-Charge. The joints system will be of extruded aluminum base members, self aligning / self centering arrangement and support plates etc. as per ASTM B221-02. The system shall be such that it provides floor to floor /floor to wall expansion control system for various vertical locations in load application areas 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 conditions 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 manufacturer's pre-engineered self-centering arrangement that freely rotates / moves in all directions. 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 directions including vertical displacement. Provision of Moisture Barrier Membrane in the Joint System to have watertight joint is mandatory requirement all as per the manufactures design and as approved by Engineer -in-Charge. (Material shall conform to ASTM 6063).						
a)	Floor Joint of 150 mm gap	76.00	Mtr	5829.95		443076.20	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities

Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
3.13	Providing and fixing of expansion joint system related with wall joint (internal/ external) location as per drawings and direction of Engineer-In- Charge. The joints shall be of extruded aluminum base members, self aligning /centering arrangement and support plates 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 Buildings & complexes with no slipping down tendency amongst the components of the 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 conform to ASTM 6063.)						
a)	Wall Joint of 150 mm gap	188.00	Mtr	4436.15		833996.20	
3.14	Providing and fixing of expansion joint system of approved make and manufacture for various roof locations as per approved drawings and direction of Engineer-In-Charge. The joints shall be of extruded aluminum base members with, self aligning and self centering arrangement support plates as per ASTM B221-02. The system shall be such that it provides water tight roof to 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 treatments. The cover plate shall be designed of width and thickness required to satisfy movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self-centering arrangement that freely rotates / moves in all directions. 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 directions including vertical displacement. The Joint System shall resists damage or deterioration 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.)						

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
a)	Roof Joint of 150 mm gap	90.00	Mtr	4900.75		441067.50	
3.15	Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by Crawler mounted, telescopic boom hydraulic piling Rig all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap).						
	600 mm dia piles	61974.00	Mtr	3.698.15		229189148.10	
3.16	Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform by Kentledge/Anchor piles method and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.						
	Note: 1. Initial and Routine Load Test shall not be carried out by Dynamic method of testing.						
	Note: 2. Testing agency shall submit the design of loading platform for the approval of Engineer-in-charge.						
a)	Single pile upto 50 tonne Safe capacity						
i)	Initial test (Test Load 2.5 times the Safe capacity)	7.00	nos.	38.561.80		269932.60	
ii)	Routine test (Test Load 1.5 times the Safe capacity)	18.00	nos.	17,422.50		313605.00	
b)	Single pile above 50 tonne and upto 100 tonne Safe capacity						
i)	Initial test (Test Load 2.5 times the Safe capacity)	25.00	nos.	46.808.45		1170211.25	
ii)	Routine test (Test Load 1.5 times the Safe capacity)	36.00	nos.	26.714.50		961722.00	
	Total of sub-head					1177967594.29	20267698.00

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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)	1454.00	Cum	4751.65		6908899.10	
4.02	Providing and laying autoclaved aerated cement blocks masonry with 150mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineerin-Charge. (The payment of RCC band and reinforcement shall be made for seperately).	16900.00	Cum	5687.10		96111990.00	
4.03	Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.	3245.00	cum	6818.60		22126357.00	
4.04	Extra for brick work / AAC block masonry / Tile brick masonry in superstructure above floor V level, for each four floors or part thereof by mechanical means.	9953.00	Cum	205.45		2044843.85	
4.05	Providing & fixing Classique Invincible Toilet Cubicle of Greenlam Sturdo / merino or equivalent approved make of sizes as per drawing which includes 600 mm door size width made of heat, bacteria, water, chemical ,scratch, impact and anti bacterial resistant 12 mm thick solid compact laminate panels (tested by Shriram Test House or equivalent approved laboratory). Finish of the compact laminate should be Suede/*Raw Silk or as approved by the engineer in charge, which includes door, pilasters & intermediate panels finished with approved texture/shade as per the details drawings & as per IS 2046 (Indian Standard) and as per fire retardant BS-476/97 Standard.						

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
	The item also includes providing and fixing in position necessary hardware made out of Stainless steel (Grade 304) as per manufacturer's specification & as approved by the Architect/ Engineer, like (1) Door Knop, (2) Gravity Hinges, (3) Thumb turn lockset indicators, (4) Coat hooks, (5) U- Channels, (6) SS-Shoe Box Plate (7) MS- Base Plate, (8) Top rail with Corner conntector (9) Rubber noise deafening tape (10) Screw & wall Plugs etc all complete to the satisfaction of engineer in charge						
	The top fitting should consist of SS round top rail which will get fixed with pilasters,with SS panel tube holder, SS corner bend (connected with top rail) will be used on the corner of cubicle in absence of brick wall, SS wall fixing is used on the wall which will hold the SS top rail. All screws will be of 304 Grade stainless steel with satin finish. All pilasters are supported by stainless steel bottom cladding.The base of stainless steel botoom cladding will be anchored to floor with a clearance height upto 110 mm. (Surface area of partitions including door shall be measured for payment. The quoted rate should be for the complete item and nothing extra is payable in this account.	538.00	Sqm		8566.00		4608508.00
	Total of sub-head					127192089.95	4608508.00

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.00	DOORS & WINDOWS						
5.01	Providing and fixing aluminium work for doors, windows, ventilators ,louvers 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 and paneling to be paid for separately)						
a)	For fixed portion						
i)	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	99931.00	Kg	391.80		39152965.80	
b)	For shutters of doors, windows & ventilators and louvers 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)						
i)	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	36708.00	Kg	452.40		16606699.20	
5.02	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).						
a)	Second class teak wood	55.00	Cum	92,743.05		5100867.75	
b)	Kiln seasoned and chemically treated hollock wood	2.00	Cum	54,930.25		109860.50	
5.03	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of Engineer-in-charge.						
a)	Second class teak wood						

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
i)	30 mm thick shutters	3.00	Sqm	2,293.60		6880.80	
5.04	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick :						
a)	Second class teak wood	2.00	Sqm	2,037.05		4074.10	
5.05	Filling the gap in between aluminium frame & adjacent RCC/ Brick/Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.						
a)	Upto 5mm depth and 5 mm width	12413.00	Metre	62.45		775191.85	
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.						
		848.00	Sqm	3176.20		2693417.60	
5.07	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	5530.00	Sqm	1003.95		5551843.50	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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 anodiccoating 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).	446.00	kg	408.85		182347.10	
5.09	Extra for polyester powder coating 50 micron on Aluminium Grill instead of anodising vide item no.5.06 above	446.00	kg	35.00		15610.00	
5.10	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).						
a)	Decorative type door	1396.00	Sqm	377.50		526990.00	
5.11	Providing and fixing expandable fasteners of specified size with necessary plastic sleeves and galvanised M.S. screws including drilling holes in masonry work /CC/ R.C.C. and making good etc. complete. 50 mm long	37056.00	Each	22.65		839318.40	
5.12	Providing and fixing curtain rods of 1.25 mm thick chromium plated brass plate, with two chromium plated brass brackets fixed with C.P. brass screws and wooden plugs, etc., wherever necessary complete :						
a)	20 mm dia	387.00	Meter	359.30		139049.10	
5.13	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm ²), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame, concrete/ masonry, etc. as per direction of Engineer-in-charge.						
a)	10mm x 120mm	29378.00	Each	91.80		2696900.40	

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Bill of Quantities

Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.14	Providing and fixing aluminium casement stays, 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.	1608.00	Each	49.50		79596.00	
5.15	Providing and fixing zinc alloyed (powder coated) touch lock for sliding window with necessary screws etc. complete.	7199.00	Each	124.40		895555.60	
5.16	Providing and fixing roller for sliding windows with necessary screws etc. complete.	10896.00	Each	72.15		786146.40	
5.17	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)	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	7314.00	Sqm	1559.75		11408011.50	
5.18	Extra for providing lipping with 2nd class teak wood battens 6 mm depth on all edges of flush door shutters (over all area of door shutter to be measured).including polishing etc complete.	7315.00	Sqm	88.00		643720.00	
5.19	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.	948.00	Sqm	162.60		154144.80	
5.20	Extra for providing frosted glass panes 4 to 6 mm thick instead of ordinary float glass panes of same thickness in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	53.00	Sqm	74.35		3940.55	
5.21	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	189.00	Sqm	127.75		24144.75	
5.22	Providing and fixing glass panes, with wooden fillets wherever necessary:						
a)	Float glass panes of thickness 4 mm	31.00	Sqm	852.60		26430.60	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.23	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.	16617.00	Sam	518.00		8607606.00	
5.24	Providing and installation of fully insulated wooden fire rated shutter of 120min. fire rating conforming to BS: 476 part 22 and IS:3614 Part II as per the prototype tested and certified by CBRI Roorkee, of minimum 50 mm thickness, comprising of 75mm x 44mm hardwood internal timber frame work, with infill of 96 kg/m ³ , ceramic fiber blankets, coated with intumescent coating on both sides for insulation. The coated insulation shall be sandwiched between 12mm thick, Non combustible Boards (Calcium Silicate of approved quality and manufacture) on both sides (edge to edge on internal Hardwood frame) and clad with 3mm thick commercial ply of approved quality & 1mm thick laminate of approved brand and manufacture on both sides, with 50mm x 14mm 2nd class teak wood lipping all round the shutter.						
	The shutter is suitable for mounted on the door frame, as per the item given below. Both frame and shutter shall be fitted with fire & smoke intumescent seal of Viper or equivalent make of size 20 x 4mm on all the three sides except bottom. The pasting of the ply/veneer/laminate should be done using automatic machine and should be free from any nails or perforations. The board shall be Resistant to vermin, mould growth, minor impact, abrasion and short term water attack. The shutter shall be fixed with the frame with the help of SS 304 grade ball bearing hinges of size 100x75x3mm of approved quality with necessary screws and making cut out for vision panel. Provisions/reinforcement for fixing all fixtures shall be built in on the door prior to the supply. The rate shall include all the materials, labour and T&P for the works described in the item above.						
a)	Single/Double Shutter	1358.00	Sam		9132.00		12401256.00

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Bill of Quantities

Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.25	Providing and fixing door frames as per BS: 476 part 22, IS:3614 Part II as per the prototype certified by CBRI Roorkee made out of 2nd class Teak Wood (Ivory Coast)frame of section 120 X 70 mm for fire resistant doors of 120 minutes fire rating, with heat activated intumescent fire seal strips of size 20 x 4 mm(for smoke sealing) provided in grooves on all three sides of the frame with one coat of approved brand of fire retardant primer including two coats of fire retardant paint FR 881or equivalent un thinned on cleared hard wood surface of door frames (@3.5 sq.m. per litre per coat) including preperation of base surface as per recommendations of manufacturer to make the surface fire retardant, including fixing the frame with 8 nos. 100 mm long, 10 mm dia metal dash fastners complete as per directions of the Engineer in charge NOTE:- cost of fire seal strips, dash fastners are included in the item. Nothing extra shall be paid if size of any component of material exceeds the limit mentioned in the item to achieve desired fire rating.	2963.00	Metre		2694.00		7982322.00
5.26	Providing and fixing UL listed door Co-ordinator of approved Make for coordination of double leaf 120 min fire rated doors, of approved brand and manufacture.	366.00	Each		11760.00		4304160.00
5.27	Providing & fixing 11.0 mm thick sandwich clear glass of approved make tested upto 2 hours fire rating and complied with BS 476: Part 22 as vision panel including cost of fire rated ceramic tape and moulding/beading all complete.	49.00	Sqm		49.001.00		2401049.00
5.28	Providing and fixing of UL listed fire rated single/double leaf panic exit devices tested in accordance with BS EN 1125: 1997 & BS EN 179: 1997, EN 1670 (Corrosion Resistant), & BS 476 Part 22 (for fire rating) with min. one year warrantee.						
a)	Double Leaf Panic Bar Set	366.00	Each		17902.00		6552132.00
5.29	Providing and fixing of heavy duty door closer of approved quality for 120 min fire door in accordance with BS:476 Part 22 for fire rating and BS EN 1154 with minimum one vear warranty.	643.00	Each		2940.00		1890420.00

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.30	Providing and fixing fire rated mortice lock with lever handle with 80 mm long cylinder of approved manufacturer for 120 min fire reated door.	265.00	Each		4312.00		1142680.00
5.31	Supply & installation of Panic Trim of approved brand & manufacture for 120 min.fire rated door.	28.00	Each		6141.00		171948.00
5.32	Providing and fixing 300 mm long stainless steel grade 304 D type back to back pull handle of approved make with necessary bolts with alen key arrangement etc complete for 120 min fire rated door.	427.00	Each		1829.00		780983.00
5.33	Supply & fixing of Fire-stop Fire sealing System Board Type(barriers) of approved make for sealing of floors, wall openings under control panels for the purpose of compartmentation.The FPSS consists of 100mm thick mineral wool insulation pad of approved make having density of 48 kg/m3 coated with FR in tumescent compound encased with 10 mm thick calcium silicate board of approved make, sealed with intumescent Fire Seal Putty of approved Make. The system is coated and fixed with openings with the help of slotted angles of size 40x40mm of 16 SWG thickness, nutbolts of size 1.5"x8mm Dia. The FPSS system all provide 2 hours fire rating as per IS 12458-1989.After insulation of this system it will be painted with Fire Retardant Paint of approved Make.	494.00	sqm		15027.00		7423338.00
5.34	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	537.00	Each	388.40		208570.80	
5.35	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)	250x16 mm	4.00	Each	189.20		756.80	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.36	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	4386.00	Each	88.10		386406.60	
b)	150x10 mm	11363.00	Each	64.30		730640.90	
5.37	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :						
a)	125 mm	56.00	Each	51.10		2861.60	
b)	100 mm	2285.00	Each	45.10		103053.50	
5.38	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles of approved quality with necessary screws etc. complete.	161.00	Each	451.95		72763.95	
5.39	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	2712.00	Each	38.00		103056.00	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.40	Providing and fixing factory made uPVC white colour casement/casement cum fixed glazed windows comprising of uPVC multichambered frame, sash and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), uPVC extruded glazing beads of appropriate dimension, EPDM gasket, stainless steel (SS 304 grade) friction hinges, zinc alloy (white powder coated) casement handles, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately)						
	Note: For uPVC frame, sash and mullion extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable						
a)	Casement cum fixed panel window having both end single casement panel, middle fixed panels and at top completely fixed ventilator with S.S friction hinges (350 x 19 x 1.9) made of (big series) frame 67 x 60 mm, sash 67 x 80 mm , & mullion 67 x 80 mm all having	67.00	Sqm	6270.45		420120.15	
5.41	Providing and fixing stainless steel (SS-304 grade) friction hinges to the side/ top hung uPVC windows, of approved quality, with necessary stainless steel screws etc. as per direction of Engineer-in-charge.						
a)	250 x 19 x 1.9 mm	63.00	Each	270.85		17063.55	
5.42	Providing and fixing casement handle made of zinc alloyed (white powder coated) for uPVC casement window with necessary screws etc.complete.	1671.00	Each	149.95		250566.45	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.43	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	3623.00	Each	622.15		2254049.45	
5.44	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc. to be paid separately).	24.00	Sqm	4608.85		110612.40	
5.45	Providing and fixing SS304 square tower bolt of approved quality with necessary with 25mm projection and Dia 10mm bolt. L=300mm in Satin Finish. Complete set including the fixing accessories.	542.00	Each		1280.55		694060.13
5.46	Providing and fixing SS304 H-Type Pull Handle of Length 457mm, 32mm Diameter and CD 305mm in Satin Steel Finish. Complete set including the fixing accessories.	286.00	Each		2276.54		651090.44
5.47	Providing and fixing 240mm Europrofile Narrow Stile Mortise Lock of approved quality with necessary , SS tube Lever Handle D Type with Oval rose ring , 70mm Pin Cylinder 1CK. Complete set including the fixing accessories.	524.00	Each		2845.68		1491133.70
5.48	Providing and fixing SS 304 Aldrop 300 x 16mm of approved quality with necessary provision of anti theft screws. Complete set including the fixing accessories.	143.00	Each		1987.91		284270.74
5.49	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	845.00	Each	269.65		227854.25	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.50	Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.						
a)	Polyester powder coated minimum thickness 50 micron aluminium	418.00	Each	54.35		22718.30	
5.51	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 stainless steel cover plate minimum 1.25 mm thickness	108.00	Each	2054.40		221875.20	
5.52	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)	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	9.00	Each	520.70		4686.30	
5.53	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-incharge						
a)	Polyester powder coated minimum thickness 50 micron aluminium	152.00	Each	74.10		11263.20	
5.54	Providing and fixing PVC rigid foam sheet 1 mm thick on door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive	136.00	Sqm	846.40		115110.40	
Sensor Sliding Door							

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
5.55	Providing and fixing automatic sliding door operator of approved brand and manufacture for a door of clear passage width ranging from 2500-3000 mm consisting of 6.25 mtr long operator with track profiles, glass clamping rails, floor guide, Radar eagle 6 sensors, 5 programme switch with knob, light barrier EM lock and cable for programme switch all complete of approved brand and quality, complete to the satisfaction of engineer in charge. nothing extra is payable if some civil work is required for fixing of the system.(Cost of door/ glass to be paid senerately)	10.00	Each		225204.00		2252040.00
Total of sub-head						102295342.10	50422883.01

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
6.00	STEEL WORK						
6.01	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 stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required. all complete	5629.00	Kq	65.80		370388.20	
b)	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	63262.00	Kq	85.95		5437368.90	
6.02	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	500.00	Kq	58.45		29225.00	
6.03	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	500.00	Kq	67.60		33800.00	
6.04	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2 mm and braced with flat iron diagonals 20x5 mm size, with top and bottom rail of T-iron 40x40x6 mm, with 40 mm dia steel pulleys, complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer	77.00	Sam	5360.65		412770.05	
6.05	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.						
a)	Hot finished seamless type tubes	10000.00	Kq	93.90		939000.00	
6.06	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.						
a)	M.S. tube	7341.00	Kq	92.00		675372.00	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
6.07	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.						
a)	Fixed to steel windows by welding.	345.00	kq	104.65		36104.25	
6.08	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-incharge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts,fasteners etc.).	9562.00	Kq	472.40		4517088.80	
6.09	Providing & fixing fly proof wire gauze to windows, clerestory windows & doors with M.S. Flat 15x3 mm and nuts & bolts complete.						
a)	Galvanised M.S. Wire gauze with 0.63 mm dia wire and 1.4 mm aperture on both sides	146.00	Sqm	544.45		79489.70	
	Total of sub-head					12530606.90	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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) finished 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.	532.00	Sqm	362.60		192903.20	
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	62.00	Sqm	350.05		21703.10	
7.03	Marble stone flooring with 18 mm thick marble stone, as per sample of marble 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	105.00	Sqm	1522.60		159873.00	
b)	Udaipur green/Jaiselmer marble	3117.00	Sqm	1589.40		4954159.80	
7.04	Providing and fixing machine cut, mirror / eggshell polished , Marble stone work for wall lining (veneer work) including dado, skirting, risers of steps etc., in required design and pattern wherever required, stones of different finished surface texture, on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with white cement slurry @ 3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing, polishing etc. all complete as per Architectural drawings, and as directed by the Engineer-in-Charge.						
a)	18 mm thick Flamed/polished granite stone slab Jet Black, Cherry Red. Elite Brown. Cat Eye or equivalent	2939.00	Sqm	4558.00		13395962.00	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
7.05	Providing and laying Polished / flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building, all complete as per the architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.						
a)	Granite stone slab jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	8991.00	Sqm	2937.70		26412860.70	
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.	9505.00	Sqm	1158.10		11007740.50	
7.07	Kota stone slabs 20 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.	1810.00	Sqm	1238.20		2241142.00	
7.08	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	7223.00	Meter	84.85		612871.55	
7.09	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre.	2610.00	Sqm	18.95		49459.50	

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Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
7.10	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	18457.00	Sqm	744.80		13746773.60	
7.11	Providing and laying rectified Glazed Ceramic floor tiles of size 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), jointing with grey cement slurry @ 3.3kg/sqm including pointing the joints with white cement and matching pigments etc., complete.	6311.00	Sqm	901.05		5686526.55	
7.12	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete						
a)	Size of Tile 600x600 mm	50500.00	Sqm	1119.40		56529700.00	
7.13	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), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc complete						
a)	Size of Tile 600x600 mm	19694.00	Sqm	1135.20		22356628.80	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
7.14	Providing and fixing 10 mm thick acid and/or alkali resistant tiles of approved make and colour using acid and/or alkali resisting mortar bedding, and joints filled with acid and/or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in- Charge.						
a)	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)						
i)	Acid and alkali resistant tile	100.00	sqm	1073.35		107335.00	
7.15	In dado/skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)						
a)	Acid and alkali resistant tile	50.00	sqm	1143.60		57180.00	
7.16	P/L 8mm thick (EN13329) HDF laminated wooden Flooring including skirting of approved brand and manufacture(class use of 31/33 AC 4 plank size 1290 X 194 mm & groove construction with edge impregnate with seal to secure long lasting joints ,secured together with the help of suitable glue, conforming to EN 13329 including the cost of 0.6 mil. PE Film and 2 mm PU Foam with accessories like Skirting, T Profile, beading, stair nose etc all complete.	178.00	sqm		1803.00		320934.00
7.17	Providing and fixing 18 mm 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, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing,moulding and polishing to edges to give high gloss finish etc. complete at all levels.						
a)	Raj Nagar Plain White marble / Udaipur green marble						
i)	Area of slab upto 0.50 sqm	290.00	Sqm	1949.45		565340.50	
ii)	Area of slab over 0.50 sqm	559.00	Sqm	1850.15		1034233.85	
a)	Granite of any colour and shade						
i)	Area of slab upto 0.50 sqm	854.00	Sqm	3351.95		2862565.30	
ii)	Area of slab over 0.50 sqm.	916.00	Sam	3113.30		2851782.80	
7.18	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.	542.00	Metre	266.25		144307.50	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
7.19	Extra for providing opening of required size & shape for wash basin/kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	870.00	Each	427.95		372316.50	
7.20	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) :						
a)	Medium shade pigment using 50% white cement, 50% ordinary cement	1671.00	Sqm	957.50		1599982.50	
7.21	Providing & fixing 2 mm thick homogeneous jointless, scratch resistant, chemical resistant, anti fungal and anti bacterial class A clean room certified, Pthalate free PVC Vinyl flooring and skirting/ coving good for laboratories of approved quality including the cost of suitable adhesive of approved quality and manufacture. Cost of coving to be paid senerately)	174.00	Sqm		1664.00		289536.00
7.22	Extra for providing and fixing coving of suitable material for PVC flooring including the cost of labour and materials for coving. Length of coving shall be measured for payment.	25.00	mtr		131.00		3275.00
7.23	Providing and fixing pure wool cut/ loop pile carpet of approved brand and manufacture having total pile weight of 1250 Gm per sqm including underlay of 8 mm thick PU foam fixed to existing floor with synthetic adhesive as approved by the manufacturer, all complete as per specification and direction of engineer in charge.	65.00	Sqm		1966.00		127790.00

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
7.24	Providing and fixing removable raised/false access flooring with system and its components of approved make for different plenum height with possible height adjustment upto 50 mm, comprising of modular load bearing floor panels supported on G.I. rectangular stinger frame work and G.I. Pedestal etc. all complete, as per the architectural drawings, as specified and as directed by Engineer-in-charge consisting of						
	a) Providing at required spacing to form modular framework, pedestals made out of GI tube of thickness minimum 2 mm and 25 mm outer diameter, fully welded on to the G.I. Base plate of size 100mm x 100mm x 3mm at the bottom of the pedestal tube, G.I. pedestal head of size 75mmx75mmx3.5 mm welded with GI fully threaded stud 16mm outer diameter with two GI Check nuts screwed on the stud for level adjustment upto 50mm, locking and stabilizing the pedestal head in position at the required level. The pedestals shall be fixed to the subfloor (base) through base plate using epoxy based adhesive of approved make or the machine screw with rawl plug.						
	b) Stringers system in all steel construction hot dipped galvanized of rectangular size 570x20x30x0.80mm thick having holes at both ends for securing the stringers on to the pedestal head using fully threaded screws ensuring maximum lateral stability in all directions, the grid formed by the pedestal and stringer assembly shall receive the floor panel, this system shall provide adequate solid, rigid support for access floor panel, the system shall provide a minimum clear uninterrupted clearance between the bottom of the floor for electrical conduits and wiring etc. all complete as per the architectural drawings, as specified and as directed by the Engineer-in-charge.						

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
	c) Providing and fixing Access Floor panel of 600x600x32 mm medium grade Filled Steel anti static high pressure Lamination of 800H grade (FS800H). Access Floor panel shall be steel welded construction with an enclosed bottom pan with uniform pattern of 64 hemispherical cones.The top and bottom plates of Steel Gauges: top 0.6 mm and bottom 0.7 mm fused spot welded together (minimum 64 welds in each dome and 20 welds along each flange). The panel should be corrosion resistant epoxy coated for lifetime rust protection and cavity formed by the top and bottom plate is filled with Pyrogrip noncombustible Portland cementitious core mixed with lightweight foaming compound. The access floor shall be factory finished with Anti-static High Pressure laminate with Non Warp technology upto 1mm thickness for superior adhesion and Surface flatness within 0.75mm.The panel is to withstand a Concentrated Load of 363 kgs applied on area 25mm x 25mm without collapse in the centre of the panel which is placed on four steel blocks.The panel will withstand and Uniformly Distributed Load (UDL) minimum 1250 kg/sqm and, an impact load of 50kg all complete as per the approved manufacturers specification and as per the direction of Engineer-in-charge. All specification must be printed on the side of the panel to ensure the quality of the product.						
a)	450 mm Finished Floor Height (FFH).	30.00	sqm	4275.40		128262.00	
	Total of sub-head					167091610.25	741535.00

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
8.00	ROOFING						
8.01	Providing and fixing GI Clip in Metal Ceiling System of 600x600 mm module which includes providing and fixing 'C' wall angle of size 20x30x20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm center to centre, suspending the main C carrier of size 10x38x10 mm made of G.I steel 0.7 mm thick from the soffit with help of soffit cleat 37x27x25x1.6 mm, rawl plugs of size 38x12 mm and C carrier suspension clip and main carrier bracket at 1000 mm c/c. Inverted triangle shaped Spring Tee having height of 24 mm and width of 34 mm made of GI steel 0.45 mm thick is then fixed to the main C carrier and in direction perpendicular to it at 600 mm centers with help of suspension brackets. Wherever the main C carrier and spring T have to join, C carrier and spring T connectors have to be used. All sections to be galvanized @ 120 gms/sqm (both side inclusive), fixing with clip in tiles into spring T with :						
a)	GI Metal Ceiling Clip in plain Beveled edge global white color tiles of size 600x600 and 0.5 mm thick with 25 mm height, made of G I sheet having galvanizing of 100 gms/ sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending.	73.00	Sqm	1329.65		97064.45	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
8.02	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30 mm thick (minimum) sheet, spaced at 1200mm center to center and cross "T" of size 24x25 mm made of 0.30mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600mm and secondary cross "T" of length 600 mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.						
	GI Metal Ceiling Lay in perforated Tegular edge global white color tiles of size 595x595 mm and 0.5 mm thick with 8 mm drop; made of GI sheet having galvanizing of 100 gms/sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC (Noise Reduction Coefficient) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece	335.00	Sqm	1163.90		389906.50	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
8.03	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1 200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle length with nuts & bolts of required size and other end of angle at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges section 0.5 mm thick bottom wedge of 80 mm with tapered flanges shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I.						
	wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :						
a)	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- Part I	6505.00	Sqm	806.20		5244331.00	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
8.04	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance > 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 &7)in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanized iron section of 0.33 mm thick (galvanized @120 gsm) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanized mild steel item (galvanised @80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod upto 1000mm length and L-shape level adjuster of size 85x25x2 mm, spaced at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be prepainted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.						
a)	With 20 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.7)	97.00	Sam	1783.80		173028.60	
b)	With 16 mm thick beveled tegular mineral fibre Antimicrobial false ceiling tile	14394.00	Sam	1621.60		23341310.40	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
8.05	Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main'T' at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross 'T' of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to form grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size(24x24X3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25						
	mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calicum silicate ceiling tiles of approved texture in the grid, including, cutting/ making opening"for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main 'T', bottom exposed with 24 mm of all Tsections shall be pre-painted with polyster baked paint,for all heights, as per specifications, drawings and as directed byEngineer-in-Charge.						
a)	Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/ opening (cut outs) having area less than 0.30 sqm.The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, non- combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <0.043 w/mK.	6231.00	Sam	1497.90		9333414.90	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
8.06	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8183, density 24kg / m ³ , 50mm thick, wrapped in 200 G Virgin Polythene bags, fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5 mm x 24 gauge wire mesh, for top most ceiling of building.	4960.00	Sam	425.10		2108496.00	
8.07	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours. Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	8035.00	Sqm	298.30		2396840.50	
8.08	Providing and fixing 10mm thick clear multi wall solar control 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.						
	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 masonry/ RCC work, at all heights including double heights, straight or curved etc. complete in all respect. (Surface Area shall be measured for the payment) (M.S. Framing to be paid for seprately)						

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
a)	For Dome Structure	606.00	Sqm		2439.00		1478034.00
8.09	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:						
a)	Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.						
b)	Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.						
c)	After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.						
d)	Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in- charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.						
e)	The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :						
a)	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	19435.00	Sqm	1034.65		20108422.75	
Total of sub-head						63192815.10	1478034.00

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1.00	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)	99184.00	Sqm	160.35		15904154.40	
9.02	15 mm cement plaster on the rough side of single or half brick wall of mix:						
a)	1:4 (1 cement: 4 fine sand)	4948.00	Sam	200.25		990837.00	
b)	1:6 (1 cement : 6 fine sand)	101177.00	Sam	185.20		18737980.40	
9.03	20 mm cement plaster of mix :						
a)	1:4 (1 cement: 4 fine sand)	89556.00	Sqm	240.15		21506873.40	
9.04	6 mm cement plaster of mix :						
a)	1:3 (1 cement : 3 fine sand)	81026.00	Sqm	143.80		11651538.80	
9.05	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers	2180.00	Per bag of 50 kg cement used in the mix	50.35		109763.00	
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.	152972.00	Sqm	40.65		6218311.80	
9.07	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	218430.00	Sqm	118.70		25927641.00	
9.08	White washing with lime to give an even shade :						
a)	New work (three or more coats)	21297.00	Sqm	17.25		367373.25	
9.09	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	25848.00	Sqm	49.65		1283353.20	

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Bill of Quantities

Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
9.10	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade :						
a)	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	1097.00	Sqm	96.80		106189.60	
9.11	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	1802.00	Sqm	32.55		58655.10	
b)	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	84373.00	Sqm	36.95		3117582.35	
9.12	Finishing walls with textured exterior paint of required shade:						
a)	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	80253.00	Sqm	150.65		12090114.45	
9.13	Finishing walls with Acrylic Smooth exterior paint of required shade						
a)	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	35089.00	Sqm	96.05		3370298.45	
9.13	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.						
a)	Two Coats	261713.00	Sqm	71.00		18581623.00	
9.14	PU Wall Coating						
i)	Preparing the wall using sand paper cleaning etc. Providing and applying epoxy / acrylic wall putty over prepared wall surfaces to achieve smooth surface to take wall coating.						

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1.00	2	3	4	5	6	7	8
ii)	Providing and applying water dispersed polyurethane wall coating of approved quality in 2 coats and finishing as per manufacturer specifications. A chemical resistant pre-packed, two part water dispersed polyurethane wall coating The total dry film thickness shall not be less than 90 microns in two coats. The cured film shall be hygienic and provide hard, flexible matt and chemical resistant surface	368.00	sqm		523.00		192464.00
9.15	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	22672.00	Sqm	75.00		1700400.00	
9.16	Polishing on wood work with Melamine polishing of approved brand and manufacture two or more coat on new work.	2220.00	Sqm	79.50		176490.00	
9.17	Providing and fixing 150 mm wide, 22 gauge and 18mm square chicken wiremesh at junctions of concrete and brick work and other locations at all heights placed symmetrically on the joint, including cutting to required size, fixing in position with cement and nails etc complete in all respects as per specifications/drawings and to the entire satisfaction of the Engineer in Charge.	14223.00	Sqm	90.00		1280070.00	
Total of sub-head						143179249.20	192464.00

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.00	MISCELLANEOUS						
10.01	Providing and fixing dry cladding with 30mm thick gang saw cut stone with (machine cut edges) of uniform colour and size as per detail drgs, 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)	White Sand Stone 30mm thick gang saw cut stone	5123.00	Sam	1500.70		7688086.10	
b)	Granite Stone of approved quality size and thickness (Base Rate Rs.200 per sqft FOR site inclusive of taxes, transportation, polishing and /or flaming or sand blasting as required.)	1281.00	Sam	3630.00		4650030.00	
10.02	Extra for stone work for wall lining on extrior walls of height more than10 m from ground level for every additional height of 3 m or part there of.	2100.00	Sam	85.90		180390.00	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.03	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 Engineer-in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid for separately and nothing extra shall be paid).	28817.00	Kg	134.75		3883090.75	
10.04	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.	19211.00	Kg	217.15		4171668.65	
10.05	Providing and fixing in wall lining medium density fibre board IS: 14587:1998 marked, Pre-laminated with one side decorative lamination and other side balancing lamination, with necessary fixing arrangement and screws etc. all complete.						
i)	18 mm thick.	192.00	Sam	915.20		175718.40	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.06	Providing and fixing frame work for partitions/ wall lining etc. made 50x50x1.6 mm hollow MS tube, placed along the walls, ceiling and floor in a grid pattern with spacing @ 60 cm centre to centre both ways (vertically & horizontally) or at required spacing near opening, with necessary welding at junctions and fixing the frame to wall/ ceiling/ floors with steel dash fasteners of 8 mm dia, 75 mm long bolt, including making provision for opening for doors, windows, electrical conduits, switch boards etc., including providing with two coats of approved steel primer etc. omplete, all as per direction of Engineer-in-charge	2867.00	Kq	78.45		224916.15	
10.07	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS: 8183 having density 24 kg/m ³ , 50 mm thick, wrapped in 200G Virgin Polythene Bags fixed to wall with screw, rawel plug & washers and held in position by criss crossing GI wire etc. complete as per directions of Engineer-in-Charge.	192.00	Sam	255.75		49104.00	
10.08	Proving and fixing glass Reinforced Concrete (G.R.C) Screens in approved size, pattern design, thickness and color of approved make .The Screen should be made from White Portland cement ,Quartz, Fine Silica Sand, Alkali Resistant Glass Fibre Super Plasticizer Polymer and U.V resistant Synthetic inorganic pigment for pigmentation. The material casting should take place in Synthetic Rubber /FRP moulds of approved make & shape. The fixing of screens to be done with Stainless Steel (SS-304) 'L' shaped Clamps, dash fasteners and pins as required at site						
	Technical specification of GRC Screens.						
	Internal member thickness 30 mm and border thickness 50 mm Dry Density: 1800 kg/m ³ (min) Water absorption: Less than 6% of dry weight by immersion over a period of 24 hours. Compressive strength: (M-40 Grade) Wet Transverse Strength: 7 N/mm (min) Abrasion Resistance: Less than 2.0 for E.H.D Thermal Conductivity: 1.63 W/MK at 3% moisture content : 1.80W/MK at 5% moisture content	525.00	Sam		5904.00		3099600.00

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.09	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 AAMA 2604 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).	12364.00	Kq	338.25		4182123.00	
10.10	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:						
	Structural analysis & design and preparation of shop drawings for the specified design loads conforming 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 aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, 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 galvanised /Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimentional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/bolts, nylon seperator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.						

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	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 manufacture, 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. 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 including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual 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						
	Note:- 1. The cost of providing extruded aluminium frames,shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant 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 measured in sqm up to two decimal places						

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
	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 accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately. 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 NBL Certified laboratories						
	1. 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"						
	2. Static Water Penetration Test. (50pa to 1500pa) as per ASTM E-331-09 testing method for a range up to 2000 ml."						
	3. Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01-05 testing method for a range upto 2000 ml"						
	4. Structural Performance Deflection and deformation by static air pressure test (1.5 times desing wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm"						
	5. Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test" Tests to be conducted on site						
	6. Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000ml"	1494.00	Sam	2409.90		3600390.60	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.11	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 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 strengthned clear float glass 6mm thick, spacer tube 12mm wide, 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.26.2)“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.“						
	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. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement	1494.00	Sqm	3730.70		5573665.80	
10.12	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 Engineer-in-Charge	150.00	Sqm	2941.60		441240.00	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.13	Design supply & installation of suspended Spider Glazing system designed to withstand the wind pressure as per IS 875 (Part-III). The Suspended System held with Spider Fittings of SS-316 Grade Steel of approved manufacturer with glass panel having 12 mm thick clear toughened glass held together with SS- 316 Grade Stainless steel Spider & bolt assembly with laminated glass fins 21 mm thick. The Glass fins and glass panel assembly shall be connected to Slab/beams by means of SS- 316 Grade stainless steel brackets & Anchor bolts and at the bottom using SS channel of 50x25x2mm using fastener & anchor bolts, non staining weather sealants of approved make, Teflon/ nylon bushes and separators to prevent bi-metallic contacts, all complete to perform as per specification and approved drawings. The complete system to be designed to accommodate thermal expansion & seismic movements etc. The joints between glass panels (6 to 8 mm) and gaps at the perimeter & in U channel of the assembly to be filled with non staining weather sealant, so as to make the entire system fully water proof & dust proof						
	The rate shall include all design, Engineering and shop drawing including approval from structural designer, labour, T&P, scaffolding, other incidental charges including wastage, enabling temporary services all fitting fixers nut bolts, washer, Buffer plates, fastener,anchors, SS channel laminated glass etc. all complete. For the purpose of payment, actual elevation area of Glazing including thickness of joints and the portion of Glass panel inside the SS channel shall be measured	488.00	sqm	6928.55		3381132.40	
10.14	Making plinth protection 50mm 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 necessary excavation, levelling & dressing & finishing the top smooth.	451.00	Sam	450.35		203107.85	

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.15	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels/ subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guaranteed for 10 years against any leakage.						
a)	For vertical surface two coats @0.70 kg per sqm per coat	3178.00	Sam	468.10		1487621.80	
b)	For horizontal surface one coat @1.10 kg per sqm	4351.00	Sam	362.35		1576584.85	
10.16	Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat.						

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
	The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment)						
a)	Overhead informatory road signage	50.00	Sqm	4722.20		236110.00	
10.17	Providing & fixing of external signages of varying sizes & shapes using GI sheet of atleast 19G, painting the entire board both surfaces with 1 coat of primer & 2 coats of synthetic enamel painting, lettering of approved type on board of any sizes in English / Hindi or Local language complete as per technical specifications & directions of Engineer.	100.00	sqm		4594.00		459400.00
10.18	Providing & Fixing Wall Mounted Nonlit Fire Exit 24" x 9" 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.	308.00	Each		2120.00		652960.00
10.19	Providing & Fixing Wall Mounted Nonlit Utility 6" x 6" 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.	308.00	Each		374.00		115192.00
10.20	Providing & Fixing Wall Mounted Nonlit Identification sign 18"x5" 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.	416.00	Each		842.00		350272.00

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1.00	2	3	4	5	6	7	8
10.21	Providing & Fixing Wall Mounted Nonlit Fire Exit 24" x 9" 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.	200.00	Each		2120.00		424000.00
10.22	Providing & Fixing Wall Mounted Nonlit directory sign 2' x 3' 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.	90.00	Each		8479.00		763110.00
10.23	Providing & Fixing Wall Mounted Nonlit directory sign 3' x 4' 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.	90.00	Each		16957.00		1526130.00
10.24	Providing & Fixing Wall Mounted Nonlit directory sign 3' x 3.5' 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.	90.00	Each		14838.00		1335420.00
10.25	Providing & Fixing Suspended Nonlit sign 48"x9" of approved make & made of 1" Aluminium framing duly PU painted and 10mm Acrylic element mounted to it from either side with the required text matters stuck on it with plotted Self Adhesive Vinyl bracketed at suitable locations, including necessary fittings & fastening etc. complete & as directed by The Engineer in charge.	330.00	Each		4239.00		1398870.00

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
10.26	Providing & Fixing Wall Mounted Nonlit directory sign 15' x 11' 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.	4.00	Each		321561.00		1286244.00
Total of sub-head						41704980.35	11411198.00

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Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
11.00	ROAD WORK & HORTICULTURE						
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 with lead upto 50 metres.making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres	48000.00	Sqm	90.10		4324800.00	
11.02	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.						
a)	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	16080.00	Cum	2089.70		33602376.00	
11.03	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achievethe desired density , complete as per specifications and directions of Engineer-in-Charge.	3750.00	Cum	2,132.25		7995937.50	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
11.04	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	1850.00	Cum	3331.95		6164107.50	
11.05	"Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately).						
	Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately.						
a)	Cement concrete prepared with batch mixing machine	2000.00	Cum	6893.25		13786500.00	
11.06	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	10000.00	litre	46.45		464500.00	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
11.07	Providing and fixing in position pre-moulded joint filler in expansion per cm joints.	40000.00	Per cm depth per cm width per m length	2.20		88000.00	
11.08	Providing and applying 2.5 mm thick road marking strips (retroreflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	2300.00	Sqm	391.25		899875.00	
11.09	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having water absorption less than 0.5% and conforming to IS: 15622, of approved make in all colours and shades in outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	600.00	Sqm	1,450.45		870270.00	
11.10	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :						
a)	On bituminous surface @ 0.50 Kg l sqm	15000.00	Sqm	27.50		412500.00	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities

Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
11.11	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifcatons and directions of Engineer-in-Charge.						
a)	50 to 100mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	900.00	Cum	7,247.70		6522930.00	
11.12	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.						
a)	40/50mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	600.00	Cum	8,345.45		5007270.00	
11.13	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer-in-Charge.						

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
a)	60mm thick Cement concrete paver block of M-35 grade with approved colour, design & pattern.	25000.00	Sqm	756.15		18903750.00	
11.14	Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:3:6 (1 cement: 3 coarse sand:6 graded stone aggregate 20 mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidate and grouted with fine sand, including finishing the top smooth etc. Complete and as per direction of Engineer-in-charge.	800.00	Sqm	382.05		305640.00	
11.15	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge)	650.00	Cum	5012.65		3258222.50	
11.16	Trenching in ordinary soil upto a depth of 60cm including removal and stacking of serviceable materials and then disposing surplus soil, 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).	14550.00	Cum	45.85		667117.50	
11.17	Supplying and stacking sludge at site including royalty and carriage complete (sludge measured in stacks will be reduced by 8% for payment).	1550.00	Cum	235.55		365102.50	
11.18	Supplying and stacking at site dump manure from approved source, including carriage complete (manure measured in stacks will be reduced by 8% for payment).	1550.00	Cum	192.05		297677.50	
a)	Screened through sieve of I.S. designation 16 mm						

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

Bill of Quantities							
Item No	Description Of Item	Total Qty	Unit	Rates as per DSR 2016	NS Item Rate	Amount DSR 2016	Amount NS Items
1.00	2	3	4	5	6	7	8
11.19	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.	31000.00	Sqm	3.80		117800.00	
11.20	Fine dressing the ground	31000.00	Sqm	2.15		66650.00	
11.21	Spreading of sludge, dump manure or/and good earth in required thickness including mixing earth and sludge or manure in the required proportion specified or directed by the Officer in Charge (Cost of sludge, dump manure or/ and good earth to be paid separately).	3800.00	Cum	52.30		198740.00	
11.22	Proving & fixing Selection no.1 grass turf with earth 50 mm to 60 mm thickness of existing ground prepared with proper level and ramming with required tools wooden (Dhurmos) and than rolling the surface with light roller make the surface smoothening and watering.	31000.00	Sam.	77.00		2387000.00	
11.23	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.	1100.00	Each	236.75		260425.00	
b)	Holes 60 cm dia, and 60 cm deep.	600.00	Each	31.15		18690.00	
	Total of sub-head					106985881.00	

Name of Work : Construction of Residential Complex and OPD Block for AIIMS, Kalyani- West Bengal

ABSTRACT OF COST (CIVIL)

S.No	DESCRIPTION OF WORK	DSR-2016 Items	NS Items
1	EARTHWORK	59332493.60	0.00
2	CONCRTE WORK	16825136.70	0.00
3	RCC WORK	1177967594.29	20267698.00
4	WALLS AND PARTITIONS	127192089.95	4608508.00
5	DOORS & WINDOWS	102295342.10	50422883.01
6	STEEL WORK	12530606.90	0.00
7	FLOORING	167091610.25	741535.00
8	CEILING & ROOFING	63192815.10	1478034.00
9	FINISHING	143179249.20	192464.00
10	MISCELLANEOUS	41704980.35	11411198.00
11	ROAD WORK & HORTICULTURE	106985881.00	0.00
	TOTAL	20182,97,799.44	891,22,320.01
	GRAND TOTAL	21074,20,119.45	

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		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						
1.00		SANITARY FIXTURES						
1.01	17.1	Providing&fixing water closet squatting pan(Indian W.C.Pan) with 100 mm sand cast iron P or S strap,10 Litre low level white P.V.C flushing cistern with manually controled device(handle lever) conforming to IS:7231 with all fittings & fixture complete including cutting and making good the walls & floors wherever required.(Parryware model no. C0117 or other equivalent model as per approved make)						
a)	17.1.1	White vitreous china orissa pattern W.C. pan of size 580 x 440 mm with integral type foot rests.	Each	10	3,494.20	34,942.00		-
				-		-		-
1.02	17.3	Providing and fixing white vitreous china Pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous flushing cistern and C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required:(Parryware model no. C0271 or other equivalent as per approved make						
a)	17.3.2	W.C. pan with ISI black solid plastic seat & lid.	Each	1,505	4,570.50	68,78,602.50		-
				-		-		-
1.03	17.7	Providing and fixing wash basin with C.I. brackets, 15mm C.P. brass pillar taps, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required:(Jaquar or other equivalent approved make.						
a)	17.7.4	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	Each	1,786	1,817.35	32,45,787.10		-
b)	17.7.9	White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked	Each	20	2,618.75	52,375.00		-
				-		-		-
1.04	17.7A	Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:- (a) White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer. (Roca model no RT5A3127CA1 &RS325463 OR other equivalent model as per approved make						
a)		White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer	Each	86	2,984.20	2,56,641.20		-
				-		-		-
1.05	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	Each	59	975.25	57,539.75		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
1.06	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :		-				-
	17.10.1	Kitchen sink with drain board		-				-
a)	17.10.1.2	510x1040 mm bowl depth 225 mm	Each	153	3,830.40	5,86,051.20		-
	17.10.2	Kitchen sink without drain board		-				-
	17.10.2.2	610x460 mm bowl depth 200 mm	Each	298	2,186.25	6,51,502.50		-
				-				-
1.07	17.11	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 (Parryware model no.C0602 or other equivalent model i.e, Jaquar & Hindware)		-				-
	17.11.2	Size 450x300x150 mm	Each	90	3,211.45	2,89,030.50		-
				-				-
1.08	17.16A	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in -charge.code RF9061A1 From Roca or other equivalent make.	Each	1,776	254.80	4,52,524.80		-
				-				-
1.09	17.22A	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineerin- charge.RF 9066A1 From Roca or other equivalent make.	Each	1,814	795.15	14,42,402.10		-
				-				-
1.10	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		-				-
	17.28.1	Semi rigid pipe		-				-
	17.28.1.1	32 mm dia	Each	964	75.60	72,878.40		-
	17.28.1.2	40 mm dia	Each	358	81.40	29,141.20		-
				-				-
1.11	17. 32	Providing and fixing superior glass mirror (of approved quality) and of required shape and size with plastic moulded frame of approved make and shape with 6 mm thick hard board backing.		-				-
a)	17.32.2	Rectangular shape 453x357 mm	Each	690	752.80	5,19,432.00		-
	17.32.4	Rectangular shape 1500x450 mm	Each	520	1,323.10	6,88,012.00		-
				-				-
1.12	17. 33	Providing and fixing 600x120x5 mm glass shelf with edges round of supported and anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete. Code no RA816708001 from Roca or othe equivalent make)	Each	1,692	573.30	9,70,023.60		-
				-				-
1.13	17.34	Providing and fixing toilet paper holder . (Roca model no. or other equivalent model as per approved make) code RA816713001 from roca or other equivalent make		-				-
a)	17.34.1	C.P. brass	Each	1,694	385.35	6,52,782.90		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-		-		-
1.14	17.78	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.(Roca model no.RS342617460 & RA80N612001 or other equivalent model as per approved make	Each	170	9,685.70	16,46,569.00		-
				-		-		-
1.15	17.80	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 ROCA model no. RS35945E000 or other equivalent model as per approved make.	Each	46	5,162.20	2,37,461.20		-
				-		-		-
1.16	17.81	Providing and fixing floor mounted , white vitreous china single piece, double traps syphonic water closet of approved brand/ make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.(ROCA model no. RS349467000 & RE80P467001 or other equivalent model as per approved make)	Each	50	12,612.65	6,30,632.50		-
				-		-		-
1.17	NS-1	Extra for Providing and fixing wall hung water closet with seat cover of approved model and slim concealed flushing cistern of 9 litre capacity, body with floor mounted frame and installation kit with SS actuating panel with dual flush with fittings in place of pedestal type water closet 10 lits. & vitreous china cistern ,complete of Roca make & model RS 34630346S,RA80P396461 & RA890031410 respectively or equivalent model of other approved make as approved by Engineer-in-charge.	Each	730			5,307.73	38,74,642.90
				-		-		-
1.18	NS -2	Providing and fixing health faucet with pipe and hook complete (Roca model no. RF9060A1 or other equivalent model as per approved make)	Each	850			2,682.00	22,79,700.00
				-		-		-
1.19	NS -3	Extra for providing and fixing white vitreous china oval shape wash basin in place of normal wash basin of size 580x440						-
a)		under Counter oval shape wash basin size 600x390mm approx. (centre tap hole) along with , single 15 mm CP brass pressmatic type pillar tap.(Roca model no. RS327893000 and RT5A4277C00 or other equivalent model as per approved make)	Each	200			7,817.00	15,63,400.00
				-		-		-
1.20	NS-4	Providing and fixing semi-recessed basins 500x450 mm including cutting and making good the walls wherever required. Code Diverta RS32711S000 from Roca or other equivalent make.	Each	11			3,450.00	37,950.00
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
1.21	NS -5	Extra for Providing and fixing counter mounted single lever wash basin mixer without pop up waste flexible copper hose connection pipe,in place of pressmatic pillar tap capable of operating with pressurized supply and having aerators/flow restrictor to achieve the desired flowrate including cutting and making goods the walls wherever required(flowrate: 4.2 LPM at 45 Psi Pressure)	Each	104		-	4,500.00	4,68,000.00
				-		-		-
1.22	NS-6	Providing and fixing white vitreous china urinal of approx. size 797x 425 mm having top inlet urinal with CP brass pressmatic urinal valve auto closing system with built in control cock & wall flanged complete including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.(roca model no. RS35945H000 & Jaquar model no.PRS-077 or other equivalent model as per approved make)	Each	46		-	20,634.00	9,49,164.00
				-		-		-
1.23	NS-7	Extrafor providing and fixing Sentronic Concealed Urinal Sensor Powered by 220 volts-AC. Concealed box diamension: 110x110x92 mm Front plate dimention :120 x120 mm in place of pressmatic urinal valve. code RT5X9215E00 from roca or other equivalent make.	Each	36		-	5,347.50	1,92,510.00
				-		-		-
				-		-		-
1.24	NS -9	P&F wall Soap Holder with brackets', complete fittings of roca or other equivalent approved make (Jaquar or other equivalent model as per approved make)	Each	1,210		-	1,200.00	14,52,000.00
				-		-		-
1.25	NS-10	Providing and fixing Liquid Soap Dispenser all cmlplete (Roca model No. RA 816070105 or equivalent model approved make)	Each	184		-	2,579.00	4,74,536.00
				-		-		-
1.26	NS -11	Providing and fixing CP brass towel rail complete of approve quality and colour .(Jaquar or other equivalent make.) 600 mm long towel rail	Each	1,054		-	750.00	7,90,500.00
				-		-		-
1.27	NS -12	Providing and fixing CP brass towel rail complete of approve quality and colour (Jaquar model no AQN-7711 or other equivalent make	Each	685		-	1,496.00	10,24,760.00
1.28	NS-13	providing and fixing CP Brass bottle trap for sink and urinal basin including CP waste fittings complete 40 mm dia complete in all respect of approved quality.	Each	100		-	1,211.00	1,21,100.00
				-		-		-
				-		-		-
1.29	NS -14	providing & fixing double robe hook with all complete fittings(Jaquar or other equivalent model as per approved make)	Each	1,344		-	850.00	11,42,400.00
				-		-		-
1.30	NS -15	Providing fixing testing and commissioning of CP brass wall/counter mounted sink mixer with C.P. wall flange, overhead swinging spout/goose neck complete as required having aerator/flow restrictor to achieve the desired flow rate and making good including necessary wall cutting/chasing and making as required as per direction of engineer in_charge(flowrate:6.4 LPM at Psi Pressure)	Each	8		-	1,625.00	13,000.00
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
1.31	NS-16	Providing and fixing beveled edge mirror 6 mm thick of superior glass(of approved quality) complete with 6 mm thick hard board ground fixed to woen cleats with ss studs complete	Sqm	400		-	1,620.00	6,48,000.00
				-		-		-
1.32	NS -17	Supply and instaling of Grab Bar S type-304,18-gauge(1mm) stainless steel tubing with satin-finish.1-1/2"(25.4 mm) outside dia.Concealed mounting flanges- 18-8 S,type-304, stainless steel palte: end flanges with two holes for attachments to wall. stainless steel with satin-finish. Each cover snaps over mounting flange to conceal mounting screws.make Euronics or equivalent-600 mm(L)	Each	61		-	1,166.10	71,132.10
				-		-		-
1.33	NS -18	Supply and installing the Swing Garab Bar 18-8 S, Type-304,18gauge(1 mm) stainless steel tubing with satin-finish.1-1/4 (25 mm) outside dia.Concealed ends are heliar welded to flanges. Backlplate-18-8S,type-304,3/16" (5mm) thick,satin-finish stainless steel with four srew holes for attachment to wall make -Euronics -EGRS 02 or equivalent.	Each	29		-	1,170.10	33,932.90
				-		-		-
1.34	NS-19	Providing & fixing SS body 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	45		-	13,780.00	6,20,100.00
				-		-		-
1.35	NS-20	Providing and fixing Hospital S S 304 -18 SWG(thickness 1.2 mm) bed pan sink with P trap, size 850W x 600Dx300Hmm + SPL with 10 litres PVC. flushing cistern , 32 mm dia flush pipe cpvc , C.I./M.S. bracket with painting with 3 coats of white paint complete with accessories, C.P. brass long body bib cock and health fucet fittings (CMP.METAL) or equivalent approved make as approved by Engineer-in-charge.	Each	6		-	37,685.00	2,26,110.00
				-		-		-
1.36	NS-21	Supply , installation, testing and commissioning of compact floor mounted pedestal base surgical scrub sink tailor made to suit the site available compatiabile with all the regular and standard plumbing system, with inbuilt geyser designed for use in operation theatre fabricated from thickness 1.6 mm 304 type stainless steel seamless 304 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 (CMP.METAL ,MPS) or equivalent approved make as approved by Engineer-in-charge.				-		-
		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		-	2,16,172.00	2,16,172.00
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
1.37	8.10	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.	Each	41	2,831.95	1,16,109.95		-
	8.10.2	Granite stone of approved shade		-		-		-
				-		-		-
				-		-		-
				-		-		-
		SUB TOTAL(SANITARY FIXTURES)		-		195,10,441.40		161,99,109.90
2.00		SOIL, WASTE AND VENT PIPES		-				
2.01	17. 35	Providing and fixing soil, waste and vent pipes- Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905 (make: NECO, HEPCO & SANT GOVIND)		-				
a)	17.35.1.3	100 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Metre	17,720	925.55	164,00,746.00		-
b)	17.35.2.3	75 mm diameter-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Metre	1,510	759.80	11,47,298.00		-
c)	NS	150/160 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Metre	2,050		-	1,144.00	23,45,200.00
				-		-		-
2.02	17. 38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		-		-		-
a)	17.38.1.3	100 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	980	489.45	4,79,661.00		-
b)	17.38.2.3	75 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	500	391.05	1,95,525.00		-
c)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	60		-	666.00	39,960.00
				-		-		-
2.03	17. 39	Providing and fixing plain bend of required degree.		-		-		-
a)	17.39.1.3	100 mm -Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	Each	2,080	307.10	6,38,768.00		-
b)	17.39.2.3	75 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	490	212.20	1,03,978.00		-
c)	NS	150 mm dia-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	150		-	378.00	56,700.00
				-		-		-
2.04	17.42	Providing and fixing double equal plain junction of required degree.		-		-		-
a)	17.42.1.3	100x100x100x100 mm Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	500	645.10	3,22,550.00		-
b)	17.42.2.3	75x75x75x75 mm-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	200	353.90	70,780.00		-
				-		-		-
2.05	17. 43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.		-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)	17.43.1.2	100x100x100mm - H.L.C.C.I	Each	1,260	623.00	7,84,980.00		-
b)	17.43.2.2	75x75x75 mm-Sand cast iron	Each	20	472.35	9,447.00		-
c)	NS	150x 150x 150 mm-H.L.C.C.I	Each	160		-	850.00	1,36,000.00
				-		-		-
2.06	17. 44	Providing and fixing single equal plain junction of required degree		-		-		-
a)	17.44.1.3	100x100x100mm -Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	1,790	503.40	9,01,086.00		-
b)	17.44.2.3	75x75x75 mm-Hubless centrifugally cast (spun) Iron epoxy coated inside & outside	Each	500	283.05	1,41,525.00		-
c)	NS	100X75X75-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	700		-	751.00	5,25,700.00
e)	NS	150x150x150-Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside	Each	20		-	1,120.00	22,400.00
				-		-		-
2.07	NS	Providing and fixing single unequal plain junction of required degree		-		-		-
a)		100x100x75-Hubless centrifugally cast (spun) Iron epoxy coated inside & outside	Each	100		-	791.45	79,145.00
b)		150x150x100 mm-H.L.C.C.I	Each	200		-	980.00	1,96,000.00
				-		-		-
2.08	17. 55	Providing and fixing door piece , insertion rubber washer 3mm thick, bolts and nuts complete		-		-		-
a)	17.55.1.2	100 mm CI	Each	1,360	512.65	6,97,204.00		-
b)	17.55.2.2	75 mm CI	Each	100	381.75	38,175.00		-
				-		-		-
2.09	17. 56	Providing and fixing terminal guard .		-		-		-
a)	17.56.1.3	100 mm-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	445	355.85	1,58,353.25		-
b)	NS	75 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	157		-	265.60	41,699.20
c)	NS	150 mm dia-Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	95		-	495.00	47,025.00
				-		-		-
2.10	17. 57A	Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe of same manufactureing.		-		-		-
a)	17.57A.1.1	100 mm dia-SS 304 grade coupling with EPDM rubber gasket	Each	17,810	360.50	64,20,505.00		-
b)	17.57.A.2.1	75 mm dia	Each	2,600	326.00	8,47,600.00		-
c)	NS	150 mm dia	Each	2,250		-	444.00	9,99,000.00
				-		-		-
2.11	17. 59	Providing and fixing M.S. stays and clamps for sand cast iron / centrifugally cast (spun) iron pipes of diameter :		-		-		-
a)	17.59.1	100 mm	Each	460	62.00	28,520.00		-
b)	17.59.2	75 mm	Each	100	56.55	5,655.00		-
c)	NS	150 mm dia	Each	95		-	71.00	6,745.00
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
2.12	17.60	Providing and fixing Trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:		-		-		-
a)	17.60.1.3	100 mm inlet and 100 mm outlet-Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	3,662	677.60	24,81,371.20		-
b)	17.60.2.3	100 mm inlet and 75 mm outlet-Hubless centrifugally cast (spun) iron epoxy coated inside & outside	Each	10	496.40	4,964.00		-
				-		-		-
2.13	17.61	Cutting chases in brick masonry walls for following diameter sand cast iron/centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement:3 coarse sand:6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement: 4 coarse sand):		-		-		-
a)	17.61.1	100 mm diameter pipe	Metre	3,100	355.70	11,02,670.00		-
b)	17.61.3	75 mm diameter pipe	Metre	500	254.65	1,27,325.00		-
				-		-		-
2.14	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:		-		-		-
a)	17.65.1	100 mm diameter pipe	Metre	17,150	40.65	6,97,147.50		-
b)	17.65.2	75 mm diameter pipe	Metre	2,500	31.00	77,500.00		-
c)	NS	150 mm diameter pipe	Metre	2,750		-	43.14	1,18,635.00
				-		-		-
2.15	17.77	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners, including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolts on each side of the pipe.		-		-		-
a)	17.77.1	Total bracket length 580 mm of approved shape and design (for single 100/150 mm dia pipe)	Each	1,100	179.40	1,97,340.00		-
b)	17.77.2	Total bracket length 810 mm of approved shape and design (for two 100/150 mm dia pipes or 150mmm)	Each	2,200	216.30	4,75,860.00		-
c)	17.77.3	Total bracket length 1040 mm of approved shape and design (for three 100/150 mm dia pipes)	Each	3,400	253.15	8,60,710.00		-
				-		-		-
2.16	18.10	Providing and fixing GI pipes complete with GI fittings and clamps, i/c cutting and making good the walls etc and making good the same for waste water disposal complete as per direction of engineer incharge.		-		-		-
a)	18.10.4	32 mm dia nominal bore (Wash basin to floor trap/floor drain)	Metre	2,200	308.35	6,78,370.00		-
b)	18.10.5	40 mm dia nominal bore (Sink,Urinal to floor trap)	Metre	1,610	394.15	6,34,581.50		-
c)	18.10.6	50 mm dia nominal bore (Floor Drain to Floor Trap)	Metre	3,260	472.40	15,40,024.00		-
				-		-		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
2.17	NS -1	Providing and fixing floor drain & balcony drain made of 100 x 50 mm dia elbow / tee as applicable connected with 50 mm dia GI pipe painted with primer, two coats of black bituminastic paint,wrapping 1 mm thick PVC tape and final coat of black bituminastic paint B109 complete in all complete including cutting and making good the walls and floor wherever required	Each	2,914		-	883.08	25,73,284.22
				-		-		-
2.18	NS -2	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)		100/150 mm dia	Metre	860		-	345.00	2,96,700.00
b)		75 mm dia	Metre	300		-	208.00	62,400.00
				-		-		-
2.19	NS -3	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 size 25 mm dia and 75 mm long minimum & shall be capable of taking 6 tonnes load and also include the supporting angles 35x35x5 mm/ of required size or MS bars steel structures as per drawing.	Each	18,300		-	379.46	69,44,155.52
				-		-		-
2.20	NS-4	Providing and fixing SS floor trap grating 143x143x5 mm thick screwable with SS fixed framed of 150x150 mm size as per approved make and model	Each	6,660		-	278.00	18,51,480.00
				-		-		-
2.21	NS -5	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						
a)		100 mm dia/150 mm dia	Each	1,530		-	3,418.95	52,30,993.50
				-		-		-
2.22	NS -6	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	2,770		-	1,194.00	33,07,380.00
				-		-		-
2.23	NS-7	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	1,750		-	350.00	6,12,500.00
				-		-		-
		SUB TOTAL(SOIL, WASTE AND VENT PIPES)					382,70,219.45	254,93,102.44
3.00		WATER SUPPLY						
3.01	17.30	Providing and fixing in position 25 mm diameter mosquito proof coupling of approved municipal design.	Each	50	38.50	1,925.00		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
3.02	18.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes , having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, 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		-		-		-
		Internal work – Exposed on wall		-		-		-
a)	18.7.1	15 mm nominal outer dia Pipes(SDR-11)	Metre	2,100	142.95	3,00,195.00		-
b)	18.7.2	20 mm nominal outer dia Pipes(SDR-11)	Metre	3,750	179.95	6,74,812.50		-
c)	18.7.3	25 mm nominal outer dia Pipes(SDR-11)	Metre	3,190	216.20	6,89,678.00		-
d)	18.7.4	32 mm nominal outer dia Pipes(SDR-11)	Metre	4,730	289.05	13,67,206.50		-
e)	18.7.5	40 mm nominal outer dia Pipes(SDR-11)	Metre	3,310	385.50	12,76,005.00		-
f)	18.7.6	50 mm nominal outer dia Pipes(SDR-11)	Metre	5,550	548.55	30,44,452.50		-
g)	NS	62.5 mm nominal outer dia Pipes(SDR-11)	Metre	2,700		-	784.00	21,16,800.00
h)	NS	75 mm nominal outer dia Pipes(SDR-11)	Metre	1,100		-	1,046.00	11,50,600.00
i)	NS	100 mm nominal outer dia Pipes(SDR-11)	Metre	800		-	1,488.00	11,90,400.00
				-		-		-
3.03	18.8	Providing and fixing Chlorinated Polyvenyl 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 1.0 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)	18.8.1	15 mm nominal outer dia pipes (SDR-11)	Metre	1,510	246.20	3,71,762.00		-
b)	18.8.2	20 mm nominal outer dia pipes (SDR-11)	Metre	9,170	284.85	26,12,074.50		-
c)	18.8.3	25 mm nominal outer dia pipes (SDR-11)	Metre	4,740	333.60	15,81,264.00		-
d)	18.8.4	32 mm nominal outer dia pipes (SDR-11)	Metre	2,370	412.90	9,78,573.00		-
				-		-		-
3.04	18.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes , having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings 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.		-		-		-
		External Work		-		-		-
a)	18.9.4	32 mm nominal outer dia pipes (SDR-11)	Metre	400	250.55	1,00,220.00		-
b)	18.9.5	40 mm nominal outer dia pipes (SDR-11)	Metre	650	321.15	2,08,747.50		-
c)	18.9.6	50 mm nominal inner dia Pipes (SDR-11)	Metre	700	484.20	3,38,940.00		-
d)	18.9.7	62.5 mm nominal inner dia Pipes (SDR-11)	Metre	650	1,081.75	7,03,137.50		-
e)	18.9.8	75 mm nominal inner dia Pipes (SDR-11)	Metre	300	1,201.05	3,60,315.00		-
f)	18.9.9	100 mm nominal inner dia Pipes (SDR-11)	Metre	150	1,618.10	2,42,715.00		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
3.05	18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including, cutting and threading the pipe etc. complete including obtaining approval for connection from DJB/Municipal corporation :		-		-		-
a)	18.13.2	25 to 80 mm nominal bore (SDR-11)	Each	24	771.20	18,508.80		-
				-		-		-
3.06	18.17	providing and fixing Gun metal gate valve with C.I. wheel of approved quality (screwed end)		-		-		-
a)	18.17.1	25 mm nominal bore	Each	243	428.20	1,04,052.60		-
	18.17.1A	20 mm nominal bore	Each	1,474	396.55	5,84,514.70		-
b)	18.17.2	32 mm nominal bore	Each	215	500.75	1,07,661.25		-
c)	18.17.3	40 mm nominal bore	Each	224	584.70	1,30,972.80		-
d)	18.17.4	50 mm nominal bore	Each	80	749.90	59,992.00		-
e)	18.17.5	65 mm nominal bore	Each	35	1,286.80	45,038.00		-
f)	18.17.6	80 mm dia nominal bore	Each	25	1,919.50	47,987.50		-
				-		-		-
3.07	18.18	Providing and fixing Ball valve (brass) of approved quality, High or low pressure with plastic floats complete		-		-		-
a)	18.18.1	15 mm	Each	120	287.25	34,470.00		-
b)	18.18.2	20mm.	Each	1,150	327.05	3,76,107.50		-
				-		-		-
3.08	18.19	Providing and fixing Gun metal non-return valve of approved quality (screwed end)		-		-		-
	18.19.1	25 mm nominal bore		-		-		-
a)	18.19.1.1	Horizontal	Each	12	410.45	4,925.40		-
	18.19.3	40 mm nominal bore		-		-		-
b)	18.19.3.1	Horizontal	Each	6	682.85	4,097.10		-
	18.19.4	50 mm nominal bore		-		-		-
c)	18.19.4.1	Horizontal	Each	17	987.70	16,790.90		-
	18.19.6	80 mm nominal bore		-		-		-
d)	18.19.6.1	Horizontal	Each	5	2,503.10	12,515.50		-
				-		-		-
3.09	18.20	Providing and fixing brass Ferrule with C.I. mouth cover including boring and tapping the main		-		-		-
a)	18.20.3	25 mm nominal bore or as per required size	Each	30	363.70	10,911.00		-
				-		-		-
3.10	18.21	Providing and fixing unplasticised PVC connection pipe with brass unions:		-		-		-
a)	18.21.2	45 cm length		-		-		-
a i)	18.21.2.1	15 mm nominal bore	Each	6,318	67.80	4,28,360.40		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
3.11	18.32	Constructing masonry chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement: 4 coarse sand) for stop cock, with C.I. surface box 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 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		-		-		-
a)	18.32.1	With F.P.s bricks	Each	94	1,195.35	1,12,362.90		-
				-		-		-
3.12	18. 48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI:12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank		-		-		-
a)		Treated water Tank and Untreated water tank	per litre	1,90,000	7.25	13,77,500.00		-
				-		-		-
3.13	18. 49	Providing and fixing C.P brass Bib Cock of approved quality.(Jaquar or other equivalent model as per approved make)		-		-		-
a)	18.49.1	15 mm nominal bore	Each	1,598	371.70	5,93,976.60		-
				-		-		-
3.14	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms. Code FLR-CHR-5021N From Jaquar or other equivalent make.		-		-		-
a)	18.51.1	15 mm nominal bore	Each	178	492.55	87,673.90		-
				-		-		-
3.15	18. 53	Providing and fixing C.P. brass Angle Valve for basin mixer and geyser/cisterns points of approved quality conforming to IS:8931.(jaquar or other equivalent model as per approved make)		-		-		-
a)	18.53.1	15 mm nominal bore	Each	7,148	475.70	34,00,303.60		-
				-		-		-
3.16	18.53A	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	Each	8,248	58.10	4,79,208.80		-
				-		-		-
3.17	18. 59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately):		-		-		-
a)	18.59.1	50 mm dia	Each	4	4,662.45	18,649.80		-
b)	18.59.2	80 mm dia	Each	4	5,649.75	22,599.00		-
				-		-		-
3.18	18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by municipal board complete with bolts,nuts rubber, insertions etc. (the tail plases if required will be paid seperatly)		-	-	-		-
a)	18.60. 1	80mm dia nominal bore (25 to 80 mm)	Each	22	3,104.90	68,307.80		-
				-		-		-
3.19	18.62	Providing and fixing PTMT ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./H.P.H.D. plastic ball.		-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)	18.62.4	40 mm nominal bore, 206 mm long weighin not less than 690 gms	Each	4	646.70	2,586.80		-
b)	18.62.5	50 mm nominal bore, 242 mm long weighin not less than 1240 gms	Each	4	1,125.25	4,501.00		-
				-		-		-
3.20	18.76	Cutting holes upto 30x30 cm in walls including making good the same		-		-		-
a)	18.76.1	with F.P.S bricks	Each	550	219.20	1,20,560.00		-
				-		-		-
3.21	18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement:2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof	Each	500	209.25	1,04,625.00		-
				-		-		-
3.22	18.85	Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00 m spacing including cutting and making good the walls including testing of joints complete as per direction of Engineer-in-charge. (The pipe length inserted in the fitting shall not be measured for payment)		-		-		-
a)	18.85.1	15.88 mm outer dia pipe	Metre	959.55	255.00	2,44,685.25		-
b)	18.85.3	28.58 mm outer dia Pipe	Metre	250	477.50	1,19,375.00		-
c)	18.85.4	34.00 mm outer dia Pipe	Metre	316	645.60	2,04,009.60		-
				-		-		-
3.23	18.86	Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00 m spacing including cutting and also including cutting and chasing of wall making and good the walls including testing of joints complete as per direction of Engineer -in-charge. (The pipe length inserted in the fitting shall not be measured for payment)		-		-		-
		Internal work Concealed in wall		-		-		-
a)	18.86.1	15.88 mm outer dia pipe	Meter	200	348.30	69,660.00		-
b)	18.86.2	22.22 mm outer dia pipe	Meter	26	484.90	12,607.40		-
				-		-		-
3.24	18.87	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per dircion of Engineer-in-charge.		-		-		-
		Coupling/Socket		-		-		-
a)	18.87.1	15.88 mm outer dia pipe	Each	30	48.80	1,464.00		-
b)	18.87.2	22.22 mm outer dia pipe	Each	120	73.15	8,778.00		-
c)	18.87.3	28.58 mm outer dia pipe	Each	40	103.35	4,134.00		-
d)	18.87.4	34.00 mm outer dia pipe	Each	4	152.15	608.60		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
3.25	18.88	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M- profile and with O-ring sealing gasket of EPDM material of Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming toJWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per dirction of Engineer-in-charge.		-		-		-
		Reducer		-		-		-
a)	18.88.1	For 22.22 mm x 15.88 mm outer dia pipe	Each	20	119.65	2,393.00		-
b)	18.88.2	For 28.58 mm x 15.88 mm outer dia pipe	Each	46	163.75	7,532.50		-
c)	18.88.3	For 28.58 mm x 22.22 mm outer dia pipe	Each	10	168.40	1,684.00		-
d)	18.88.6	For 34.00 mm x 28.58 mm outer dia pipe	Each	35	220.70	7,724.50		-
				-		-		-
3.26	18.90	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M- profile and with O-ring sealing gasket of EPDM material of required dia as per dirction of Engineer-in-charge.		-		-		-
		Elbow 90o		-		-		-
a)	18.90.1	15.88 mm outer dia pipe	Each	120	255.00	30,600.00		-
b)	18.90.2	22.22 mm outer dia pipe	Each	20	645.60	12,912.00		-
c)	18.90.3	28.58 mm outer dia pipe	Each	10	111.50	1,115.00		-
d)	18.90.4	34.00 mm outer dia pipe	Each	12	126.60	1,519.20		-
				-		-		-
3.27	18.92	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M- profile and with O-ring sealing gasket of EPDM material of required dia as per dirction of Engineer-in-charge.		-		-		-
		Equal Tee		-		-		-
a)	18.92.1	15.88 mm outer dia pipe	Each	25	184.70	4,617.50		-
b)	18.92.2	22.22 mm outer dia pipe	Each	10	126.60	1,266.00		-
c)	18.92.3	28.58 mm outer dia pipe	Each	5	317.10	1,585.50		-
d)	18.92.4	34.00 mm outer dia pipe	Each	7	507.60	3,553.20		-
				-		-		-
3.28	18.99	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M- profile and with O-ring sealing gasket of EPDM material of required dia as per dirction of Engineer-in-charge.		-		-		-
		Female Threaded Elbow		-		-		-
a)	18.99.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	Each	54	179.00	9,666.00		-
				-		-		-
3.29	NS-1	Providing and fixing pressure reducing valve with strainer delivering desired rate of flow with flanged connection. The complete system is tested to a pressure not less than 15 Kg / Sq.cm and suitable to reduce the pressure upto 1 Kg/Sq.cm) including flanges / unions, nuts, bolts, 2# Pressure gauge, 1# bye pass valve and washers complete as required.		-		-		-
a)		15 mm dia	Each	1		-	2,500.00	2,500.00
b)		20 mm dia	Each	35		-	3,600.00	1,26,000.00
c)		25 mm dia	Each	8		-	4,200.00	33,600.00

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
d)		32 mm dia	Each	16		-	6,100.00	97,600.00
e)		40 mm dia	Each	4		-	9,900.00	39,600.00
				-		-		-
3.30	NS-4	Providing and fixing Ball valve (SS) as per specifications of PN 10 rating.		-		-		-
a)		25 mm	Each	240		-	1,100.00	2,64,000.00
b)		32 mm	Each	325		-	1,300.00	4,22,500.00
c)		40 mm	Each	130		-	1,800.00	2,34,000.00
d)		50 mm	Each	140		-	2,000.00	2,80,000.00
3.31	NS-5	Supply, installation, Testing & Commissioning of PN10 rated Solenoid valves including High / Low switches, and all necessary electric wiring, cabling complete		-		-		-
a)		Size of valve 25 mm dia	Each	9		-	5,850.00	52,650.00
b)		Size of valve 32 mm dia	Each	20		-	6,363.00	1,27,260.00
c)		Size of valve 40 mm dia	Each	13		-	7,004.00	91,052.00
d)		Size of valve 50 mm dia	Each	51		-	8,190.00	4,17,690.00
				-		-		-
3.32	NS-6	Providing and fixing Indian make CP brass air valves with gunmetal isolation valve fixed on pipe lines.		-		-		-
a)		15mm n.b air vent with 15mm isolation valve.	Each	20		-	1,040.00	20,800.00
b)		20mm n.b air vent with 20mm isolation valve.	Each	71		-	1,404.00	99,684.00
				-		-		-
3.33	NS-8	Providing and Fixing concealed Bath & Shower Mixer and diverter cutting and making good the wall complete as per instructions of the engineer-in-charge.	Each	1,493		-	2,500.00	37,32,500.00
				-		-		-
3.34	NS-9	Providing and Fixing Over head shower 100 mm dia having aerators/flow restrictor to achieve the desired flowrate with Shower Arm complete as per instructions of the engineer-in-charge (Flowrate : 8.4 LPM at 45 Psi pressure)	Each	1,493		-	1,650.00	24,63,450.00
				-		-		-
3.35	NS-10	Providing and Fixing CP Bath spout with wall flange having aerators/flow restrictor to achieve the desired flowrate complete as per instructions of the engineer-in-charge or as per equivalent make. (Flowrate : 8.4 LPM at 45 Psi pressure)	Each	1,493		-	1,200.00	17,91,600.00
				-		-		-
				-		-		-
3.36	NS-11	Providing and fixing CP Brass single lever basin mixer with Swinging spout (Table Mounted) with 450 mm long braided hoses of approved quality confirming to IS :8931. Code no. FLR-CHR-5173B from Jaquar or equivalent make.	Each	449		-	12,500.00	56,12,500.00
				-		-		-
				-		-		-
3.37	NS-13	Providing and fixing closed cell polyolefin tube type thermal insulation over hot water pipes with thermal conductivity not exceeding 0.034 w/mk. At an average temp of 0 degree c , having density of material as 30 kg/m3 , with operating range of -80 degree C to +95 degree C, hcfc- free including all required accessories complete as per manufactur"s specifications for the following pipe sizes and finishing it as per site requirement.(Hot water supply/return pipes)		-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)		15 mm dia	Metre	1,890		-	85.00	1,60,650.00
b)		20 mm dia	Metre	3,200		-	100.00	3,20,000.00
c)		25 mm dia	Metre	1,540		-	125.00	1,92,500.00
d)		32 mm dia	Metre	680		-	135.00	91,800.00
e)		40 mm dia	Metre	510		-	150.00	76,500.00
f)		50 mm dia	Metre	290		-	165.00	47,850.00
g)		65 mm dia	Metre	70		-	174.00	12,180.00
h)		80 mm dia	Metre	330		-	195.00	64,350.00
				-		-		-
3.38	NS -14	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	45		-	3,500.00	1,57,500.00
				-		-		-
3.39	NS -15	Supplying, fixing, testing and commissioning of storage type water heater (Geyser) etc. with outer body of ABS, 2 MM Thick Mild Steel inner Tank with glass line coating,option of 1/2/3 KW electrically operated single phase 230V, including Glass Lined Double Heating Element,Digital Display, Multifunction Safety Device, ELCB, Anode Rod System, and Brackets for fixing on wall with connecting Wire & plug etc. conforming to IS: 2082 and energy efficient star rated model.		-		-		-
a)		15 Litre Capacity	Each	120		-	4,550.00	5,46,000.00
b)		25 Litre Capacity	Each	410		-	6,783.00	27,81,030.00
c)		35 litre capacity	Each	105		-	8,072.00	8,47,560.00
				-		-		-
3.40	NS -16	Providing & fixing water storage cooler of approved make and brand with SS body Complete in respects-230V Single Phase. (Voltas/Shriram/BLUE-STAR)		-		-		-
a)		minimum flow rate of 40 ltrs. Per hour and storage capacity 80 ltrs.	Each	32		-	30,500.00	9,76,000.00
3.41	NS -17	Providing and fixing approved make & suitable model of R.O. plant 100 ltrs. Per hour flow rate having capacity to treat the raw water having TDS 1200 ppm and not less than 40%. The treated water should have TDS less than 100 ppm and hardness less than 50 ppm. The operating voltage to 230 volt AC +/- 10% alongwith required capacity pump and solenoid valves, dry run protection of pump, automatic tank level control, inbuilt auto flush timer for periodic flushing of membranes, hydro pneumatic tank, over voltage and over current protection with switch mode power supply system antiscaling dosing 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)		3 Nos. of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type		-		-		-
d)		UV lamp of minimum capacity 100 LPM and minimum lamp wattage 9W	Each	10		-	95,000.00	9,50,000.00
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
3.42	NS-18	Providing and fixing approved make & suitable model of R.O. plant (fully automatic operation) 600ltrs. 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 its 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)		-		-		-
		10 micron polypropylene sediment pre filter		-		-		-
		10 micron bacteriostatic activated carbon block on line micron filter with 5 micron rating		-		-		-
		Required Nos. and size of reverse osmosis memberane with 0.0001 micron pore size energy saving poly amide type		-		-		-
		UV lamp of minimum capacity 600LPH and minimum lamp wattage 15W		-		-		-
		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	8		-	2,50,000.00	20,00,000.00
				-		-		-
		SUB TOTAL(Water Supply)		-		239,83,274.15		295,90,706.00
4.00		SEWAGE & DRAINAGE		-				
4.01	19.1	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)	19.1.1	100 mm diameter	Metre	278	216.25	60,117.50		-
				-		-		-
4.02	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		-				
a)	19.2.1	100 mm diameter S.W. pipe/RCC NP2	Metre	350	622.95	2,18,032.50		-
b)	19.2.2	150 mm diameter S.W. pipe/RCC NP2	Metre	2,328	761.85	17,73,586.80		-
				-		-		-
4.03	19. 4	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)	19.4.2	150x100mm size P type		-		-		-
a.i)	19.4.2.1	F.P.S. Bricks class designation 75	Each	176	1,623.25	2,85,692.00		-
				-		-		-
4.04	19. 6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement:2 fine sand) including testing of joints etc. complete		-				
a)	19.6.2	150 mm dia R.C.c. pipe	Metre	2,986	356.70	10,65,106.20		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-		-		-
4.05	19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand), R.C.C. top slab with 1:2:4 mix (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 necessary 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)	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):			-			-
a i)	19.7.1.1	With F.P.S. bricks with class designation 75	Each	191	8,634.10	16,49,113.10		-
								-
4.06	19.8	Extra depth for manholes						-
a)	19.8.1	Size 90 x 80 cm						-
a i)	19.8.1.1	With F.P.S. bricks class designation 75	Metre	38	5,718.60	2,17,306.80		-
								-
4.07	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS: 10910 on 12 mm dia steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per 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	1,810	327.90	5,93,499.00		-
								-
4.08	19.21	Making connection of drain or sewer line with existing manhole including breking 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)	19.21.1	For pipes 100 to 250 mm dia	Each	16	391.15	6,258.40		-
								-
	NS	Providing and laying Laboratory/hospital effluent waste pipe and fitting of high density polyethelene (HDPE),CLASS -PE 80 ,pressure rating PN-6,conforming to IS :4427, electric fusion joints/flanged joints , fittings and jointing						-
a)		160 mm dia	Metrte	200		-	2088.0	4,17,600.00
b)		200 mm dia	Metrte	100		-	2520.0	2,52,000.00
								-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		SUB TOTAL(Sewerage , Storm & Drainage)		-		58,68,712.30		6,69,600.00
5.00		SOLAR WATER HEATING SYSTEM		-				-
5.01	18.10	Providing and fixing G.I.fittings and clamps,i/c cutting and making good the walls etc.		-		-		-
		Internal work - Exposed on wall		-		-		-
c)	18.10.3	25 mm nominal bore	Meter	826	247.85	2,04,724.10		
d)	18.10.4	32 mm nominal bore	Meter	1,058	308.35	3,26,234.30		
e)	18.10.5	40 mm nominal bore	Meter	1,172	394.15	4,61,943.80		
f)	18.10.6	50mm nominal bore	Meter	140	472.40	66,136.00		
g)	NS	65 mm nominal bore	Meter	250		-	585.00	1,46,250.00
h)	NS	80 mm nominal bore	Meter	80		-	1,004.00	80,320.00
				-		-		-
5.02	NS-1	Insulation of G.I.piping with aluminium cladded mineral fibre glass insulation suitable for outdoor applications suitable for following pipe sizes		-		-		-
a)		25 dia	Meter	826		-	557.00	4,60,082.00
b)		32 dia	Meter	1,048		-	616.00	6,45,568.00
c)		40 dia	Meter	1,172		-	675.00	7,91,100.00
d)		50 dia	Meter	140		-	725.00	1,01,500.00
e)		65 dia	Meter	410		-	895.00	3,66,950.00
				-		-		-
5.03	NS-2	Supply, Installation, Testing and commissioning of the system complete with necessary Temperature gauge, Temperature sensor, Thermostat with rubber gaskets, Electrical & Control wiring	Lot	46		-	12,774.00	5,87,604.00
				-		-		-
5.04	NS -3	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	1,827		-	100.00	1,82,700.00
b)		32 mm dia to 50 mm dia	Each	2,370		-	120.00	2,84,400.00
c)		65 mm dia to 80 mm dia	Each	490		-	140.00	68,600.00
				-		-		-
5.05	NS-4	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 minimum 3mm thick 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. Suitable Electrical Heater backup to be provided inside the tank along with thermostat		-		-		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
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 and electrical heaters shall also 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 40x40x5 MS angle adequate for 150 Km/Hr wind speed.		-		-		-
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/ inter-solar. 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 procured after obtaining the approval of shop drawings from HSCC / Engineer-in-charge.(Electric heating element shall not be provided in the system as the solar hot water system will supply the hot water to the individual geyser).		-		-		-
i)		Solar System of Capcity 500 Litre/day (With minimum 8nos of Collector of 2.0 Sqm area each)	Each	6		-	2,75,000.00	16,50,000.00
ii)		Solar System of Capcity 1000 Litre/day (With minimum 8nos of Collector of 2.0 Sqm area each)	Each	11		-	2,75,000.00	30,25,000.00
iii)		Solar System of Capcity 1500 Litre/day (With minimum 12 nos of Collect) of 2.0 Sqm area each	Each	16		-	3,90,000.00	62,40,000.00
iv)		Solar System of Capcity 2000 Litre/day (With minimum 12 nos of Collect) of 2.0 Sqm area each	Each	4		-	4,15,000.00	16,60,000.00
				-		-		-
		SUBTOTAL(SOLAR WATER HEATING SYSTEM)		-		10,59,038.20		162,90,074.00
6.00		RAIN WATER PIPING		-		-		-
6.01	12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15/20 cm diameter and weighing not less than 440 grams	Each	195	40.90	7,975.50		-
6.02	17.35	Providing and fixing rain water ,soil, waste and vent pipes.		-		-		-
a)	17.35.1	100 mm dia.		-		-		-
a i)	17.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS:3989	Metre	4,250	921.65	39,17,012.50		-
b)	NS	150 mm dia pipe as per IS:3989	Metre	1,500		-	2,151.70	32,27,543.56
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
6.03	17.37	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.		-		-		-
a)	17.37.1	for 100 mm dia. pipe	Each	1,120	167.35	1,87,432.00		-
b)	NS	for 150 mm dia pipe	Each	730		-	200.00	1,46,000.00
				-		-		-
6.04	17.39	Providing and fixing plain bend of required degree.		-		-		-
a)		100 mm	Each	125	334.95	41,868.75		-
a ii)	17.39.1.2	Sand cast iron S&S as per IS:3989		-		-		-
b)	NS	150 mm	Each	70		-	1,191.79	83,425.43
				-		-		-
6.05	17.40	Providing and fixing heel rest sanitary bend.		-		-		-
a)	17.40.1	100 mm dia		-		-		-
a.ii)	17.40.1.2	sand cast iron S&S as per IS-3989	Each	125	370.95	46,368.75		-
b)	NS	150 mm dia	Each	70		-	925.20	64,763.73
				-		-		-
6.06	17.57	Providing and fixing collar		-		-		-
a)	17.57.1	100 mm		-		-		-
a.ii)	17.57.1.2	Sand cast iron S&S as per IS-3989	Each	125	351.20	43,900.00		-
b)	NS	150 mm	Each	70		-	935.83	65,507.93
				-		-		-
6.07	17.58	Providing lead caulked joints to sand cast iron /centrifugally cast (spun) iron pipes and fittings of diameter:		-		-		-
a)	17.58.1	100 mm	Each	1,880	309.95	5,82,706.00		-
b)	NS	150 mm	Each	1,220		-	401.00	4,89,220.00
				-		-		-
6.08	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate, grey, or buff etc. over a coat of primer (of approved quality) for new work:		-		-		-
a)	17.65.1	100 mm diameter pipe	Metre	4,250	40.65	1,72,762.50		-
b)	NS	150 mm diameter pipe	Metre	2,000		-	45.00	90,000.00
				-		-		-
		SUB TOTAL(Rain Water pipe & fitting)		-		50,00,026.00		41,66,460.66
7.00		EXTERNAL WATER SUPPLY		-				
7.01	18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. (For Pump Room)		-		-		-
		Internal work - Exposed on wall		-		-		-
a)	18.10.3	25 mm dia nominal bore	Metre	30	247.85	7,435.50		-
b)	18.10.5	40 mm dia nominal bore	Metre	760	394.15	2,99,554.00		-
c)	18.10.6	50 mm dia nominal bore	Metre	870	472.40	4,10,988.00		-
d)	NS	80 mm dia nominal bore	Metre	200		-	1,004.00	2,00,800.00
e)	NS	150 mm dia nominal bore	Metre	150		-	2,140.00	3,21,000.00
f)	NS	200 mm dia nominal bore	Metre	60		-	2,567.00	1,54,020.00

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-		-		-
7.02	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.		-		-		-
a)	18.12.3	25 mm dia nominal bore	Metre	15	205.85	3,087.75		-
b)	18.12.4	32 mm dia nominal bore	Metre	20	247.40	4,948.00		-
c)	18.12.5	40 mm dia nominal bore	Metre	590	301.05	1,77,619.50		-
d)	18.12.6	50 mm dia nominal bore	Metre	885	342.70	3,03,289.50		-
e)	18.12.7	65 mm dia nominal bore	Metre	115	451.70	51,945.50		-
f)	18.12.8	80 mm dia nominal bore	Metre	260	576.30	1,49,838.00		-
				-		-		-
7.03	18.17	Providing and fixing gunmetal gate valve with CI wheel of approved quality (Screwed end) (For Garden Hydrant)		-		-		-
a)	18.17.1	25 mm NB	Each	140	428.20	59,948.00		-
				-		-		-
7.04	18. 19	Providing and fixing gun metal non-return valve of approved quality (screwed end)		-		-		-
a)	18. 19.1	25 mm nominal bore		-		-		-
	18. 19.1.1	Horizontal	Each	11	410.45	4,514.95		-
				-		-		-
b)	18.19.3	40 mm nominal bore		-		-		-
	18.19.3.1	Horizontal	Each	8	682.85	5,462.80		-
c)	18.19.4	50 mm nominal bore		-		-		-
	18.19.4.1	Horizontal	Each	19	987.70	18,766.30		-
				-		-		-
d)	18.19.6	80 mm nominal bore		-		-		-
	18.19.6.1	Horizontal	Each	4	2,503.10	10,012.40		-
				-		-		-
7.05	18.31	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :		-		-		-
a)	18.31.1	100 mm diameter		-		-		-
		Class II	Each	14	3,689.75	51,656.50		-
b)	18.31.3	150 mm diameter		-		-		-
		Class II	Each	27	5,387.20	1,45,454.40		-
c)	18.31.4	200 mm diameter		-		-		-
		Class II	Each	8	11,316.05	90,528.40		-
				-		-		-
7.06	18. 33	Constructing masonry chamber 60x60x75 cm , inside with 75 class designation 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 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 : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)	18.33.1	With F.P.S. bricks	Each	16	6,849.60	1,09,593.60		-
				-		-		-
7.07	18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :						-
a)	18.34.1	With F.P.S. bricks	Each	52	11,842.75	6,15,823.00		-
				-		-		-
7.08	18.40	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :						-
a)	18.40.3	25 mm dia nominal bore	Metre	15	9.10	136.50		-
b)	18.40.4	32 mm dia nominal bore	Metre	20	10.85	217.00		-
c)	18.40.5	40 mm dia nominal bore	Metre	590	12.35	7,286.50		-
d)	18.40.6	50 mm dia nominal bore	Metre	885	14.80	13,098.00		-
e)	18.40.7	65 mm dia nominal bore	Metre	115	18.25	2,098.75		-
f)	18.40.8	80 mm dia nominal bore	Metre	260	21.20	5,512.00		-
				-		-		-
7.09	18.41	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :						-
	18.41.3	25 mm dia nominal bore	Metre	10	69.50	695.00		-
	18.41.4	32 mm dia nominal bore	Metre	10	71.30	713.00		-
a)	18.41.5	40 mm diameter pipe	Metre	590	72.25	42,627.50		-
b)	18.41.6	50 mm diameter pipe	Metre	885	74.95	66,330.75		-
c)	18.41.7	65 mm diameter pipe	Metre	115	118.30	13,604.50		-
	18.41.8	80 mm dia nominal bore	Metre	10	121.90	1,219.00		-
				-		-		-
7.10	18.47	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required:						-
a)	18.47.2	20 mm nominal bore	Each	10	389.45	3,894.50		-
b)	18.47.3	25 mm nominal bore	Each	22	424.30	9,334.60		-
c)	18.47.4	32 mm nominal bore	Each	22	459.15	10,101.30		-
d)	18.47.6	50 mm diameter pipe	Each	28	682.85	19,119.80		-
e)	18.47.8	80 mm diameter pipe	Each	12	996.45	11,957.40		-
				-		-		-
7.11	18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately):						-
a)	18.59.1	50 mm dia	Each	26	4,662.45	1,21,223.70		-
b)	18.59.2	80 mm dia	Each	10	5,649.75	56,497.50		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-		-		-
7.12	18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by municipal board complete with bolts,nuts rubber, inserstions etc. (the tail plases if required will be paid seperatly)		-	-	-		-
a)	18.60. 1	80mm dia nominal bore (25 to 80 mm)	Each	22	3,104.90	68,307.80		-
				-		-		-
7.13	18.61	Providing and Fixing CI dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373		-		-		-
a)	18.61.1	80 mm nominal bore	Each	1	3,633.50	3,633.50		-
c)	18.61.3	150 mm nominal bore	Each	6	7,443.40	44,660.40		-
d)	18.61.4	200 mm nominal bore	Each	4	10,430.75	41,723.00		-
				-		-		-
7.14	18.68	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523 :		-		-		-
a)	18.68.1	up to 600 mm dia.	Qnt.	209	15,394.40	32,17,429.60		-
				-		-		-
7.15	18.70	Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket :		-		-		-
a)	18.70.1	100 mm dia pipe	joints	1,290	65.10	83,979.00		-
b)	18.70.2	150 mm dia pipe	joints	1,118	102.35	1,14,427.30		-
c)	18.70.3	200 mm dia pipe	joints	860	154.30	1,32,698.00		-
d)	18.70.4	250 mm dia pipe	joints	67	187.65	12,572.55		-
				-		-		-
7.16	18.72	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :		-		-		-
a)	18.72.1	100 mm dia Ductile Iron Class K-7 pipes	Metre	3,000	926.30	27,78,900.00		-
b)	18.72.2	150 mm dia Ductile Iron Class K-7 pipes	Metre	2,600	1,340.10	34,84,260.00		-
c)	18.72.4	200 mm dia Ductile Iron Class K-7 pipes	Metre	2,000	1,853.45	37,06,900.00		-
d)	18.72.5	250 mm dia Ductile Iron Class K-7 pipes	Metre	150	2,509.35	3,76,402.50		-
				-		-		-
7.17	18.80	Disinfecting CI water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory		-		-		-
a)	18.80.1	80 mm dia CI pipe	Metre	3,000	7.83	23,481.00		-
b)	18.80.2	100 mm dia CI pipe	Metre	2,600	10.30	26,772.20		-
c)	18.80.3	150 mm dia CI pipe	Metre	2,000	15.48	30,956.00		-
d)	18.80.4	200 mm dia CI pipe	Metre	150	20.70	3,105.23		-
	18.80.5	250 mm dia CI pipe	Metre	100	26.11	2,611.00		-
				-		-		-
7.18	NS-1	Supply installation, testing & commissioning of cast iron (CI) Butterfly Valves of PN 16 rating		-		-		-
a)		65 mm nominal bore	Each	34		-	8,432.00	2,86,688.00
b)		80 mm nominal bore	Each	28		-	9,117.00	2,55,276.00
c)		100 mm nominal bore	Each	16		-	10,258.00	1,64,128.00

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
d)		150 mm nominal bore	Each	17		-	12,686.00	2,15,662.00
				-		-		-
7.19	NS-2	Providing and fixing Ball valve (SS) as per specifications of PN 10 rating.		-		-		-
a)		25 mm	Each	220		-	2,797.00	6,15,340.00
b)		32 mm	Each	325		-	3,496.00	11,36,200.00
c)		40 mm	Each	115		-	4,519.00	5,19,685.00
d)		50 mm	Each	112		-	6,108.00	6,84,096.00
7.20	NS -3	Providing and fixing gun metal foot valve with stainer of approved quality/model complete in all respect		-		-		-
a)		50 mm dia	Each	6		-	4,000.00	24,000.00
b)		80 mm dia	Each	6		-	5,500.00	33,000.00
c)		100 mm dia	Each	8		-	6,200.00	49,600.00
d)		150 mm dia	Each	4		-	7,500.00	30,000.00
				-		-		-
7.21	NS -4	Supply, installation, testing and commissioning of heavy duty Pop-up type irrigation sprinkler with working pressure range of 2-6 Bar	Each	76		-	18,297.00	13,90,572.00
				-		-		-
7.22	NS-5	Providing and fixing of C.I. 'Y' type strainer flanged with SS 304 perforated screen including nuts, bolts and rubber insertions etc		-		-		-
a)		80 mm dia	Each	6		-	5,318.00	31,908.00
b)		100 mm dia	Each	6		-	6,121.00	36,726.00
c)		150 mm dia	Each	5		-	7,540.00	37,700.00
7.23	NS-6	Supplying and installing Bourden type pressure gauges range 0 to 20 bar 10mm brass gauge cock brass pipe snubber etc complete.	Each	20		-	2,631.00	52,620.00
				-		-		-
7.24	NS-7	Providing fixing and testing water flow meters in CI/brass body flanged at both ends with companion flanges,gaskets, bolts nuts and washers, with electronic digital type display for real time & totalized flow rate of water with panel and cabinet ,memory facility, flow switches and sensors and required accessories complete including cutting and making good the pipeline, and making all electrical connections, water meters should be BMS compatible testing to be carried out at 200 lbs/psi with cold water for consistent quality.(with bypass arrangements with 3 valves)		-		-		-
a)		Sizes of valve 25 mm dia	Each	1		-	10,000.00	10,000.00
b)		Sizes of valve 32 mm dia	Each	14		-	12,000.00	1,68,000.00
c)		Sizes of valve 40 mm dia	Each	14		-	15,000.00	2,10,000.00
d)		Sizes of valve 50 mm dia	Each	16		-	18,000.00	2,88,000.00
e)		Sizes of valve 65 mm dia	Each	4		-	20,000.00	80,000.00
f)		Sizes of valve 80 mm dia	Each	7		-	25,000.00	1,75,000.00
g)		Sizes of valve 150 mm dia- flushing ring line from STP and Domestic Ring line from Pump room	Each	2		-	28,000.00	56,000.00
h)		Sizes of valve 200 mm dia - irrigation ring line from STP	Each	1		-	35,000.00	35,000.00
				-		-		-
7.25	NS-8	Providing and fixing puddle flanged including 40 cm long GI pipe piece welded/threaded with MS plates 450x450x6 mm thick with both end screwed/flanged.		-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)		For 80 mm dia pipe	Each	59		-	1,564.00	92,276.00
b)		For 100 mm dia pipe	Each	26		-	1,687.00	43,862.00
c)		For 150 mm dia pipe	Each	20		-	2,063.00	41,260.00
				-		-		-
7.26	NS -9	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	80		-	7,500.00	6,00,000.00
				-		-		-
7.27	NS-10	Supply, installation, testing and commissioning of HDPE Pipe PE-100 Material grade, PN 10 (10.00 Kg/cm2) pressure rating conforming to IS : 4984 - 1995/ISO : 4427-1996 (E) including heavy duty Electro welded fitting such as reducers, tees, bends, flange, steel structural supports, clamps including cost of MTR fittings as required for valves and irrigation sprinklers, sand Bed of 200 mm thick laid as per manufacturer recommendation etc. (For irrigation Supply)		-		-		-
a)		25 mm dia	Meter	820		-	72.00	59,040.00
b)		40 mm dia	Meter	650		-	109.00	70,850.00
c)		50 mm dia	Meter	350		-	169.00	59,150.00
d)		65 mm dia	Meter	950		-	268.00	2,54,600.00
e)		80 mm dia	Meter	790		-	281.00	2,21,990.00
f)		100 mm dia	Meter	2,100		-	808.00	16,96,800.00
g)		150 mm dia	Meter	1,800		-	1,302.00	23,43,600.00
				-		-		-
7.28	NS-11	Providing and fixing motorized butterfly valve/rotary actuator (CI body, SS316 disc, EPDM boot seat, SS416 shaft, RPTEF bushing @PN16 rating) for filling of water tank complete with electrical water level control panel, including by-pass connection for the same dia with manually operated butterfly valve and all piping and accessories complete in all respects - For Cluster Level UG Domestic and Flushing Tanks Clusterwise		-		-		-
				-		-		-
		65 mm dia	Each	3		-	7,500	22,500.00
		80 mm dia	Each	4		-	9,000	36,000.00
		100 mm dia	Each	2		-	11,500	23,000.00
				-		-		-
		SUB TOTAL(External Water Supply)		-			170,58,952.48	128,25,949.00
8.00		BOREWELL(2 nos.)		-				
8.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :Providing and laying cement concrete 1:2:4 mix (for sanitary sealing of well at top.)		-				
a)	4.1.3	"1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal	Cum	8	5,481.95	43,855.60		-
				-		-		-
8.02	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc		-				
a)	18.12.7	65 mm dia nominal bore	Metre	320	451.70	1,44,544.00		-
b)	18.12.8	80 mm dia nominal bore	Metre	400	576.30	2,30,520.00		-
				-		-		-
8.03	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)		-				

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)	18.17.6	80 mm dia(horizontal)	Each	16	1,919.50	30,712.00		-
				-	-	-		-
8.04	18.19	Providing and fixing gunmetal non return valve of approved make tested to a pressure of 21kg/sqcm.		-	-	-		-
a)	18.19.6.1	80 mm dia(horizontal)	Each	8	2,503.10	20,024.80		-
				-	-	-		-
8.05	23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level		-	-	-		-
		All types of soil		-	-	-		-
a)	23.1.1.3	400mm	Metre	320	518.95	1,66,064.00		-
	23.1.2	Rocky strata including Boulders		-	-	-		-
b)	23.1.2.3	400 mm dia	Metre	160	1,034.50	1,65,520.00		-
				-	-	-		-
8.06	23.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.		-	-	-		-
	23.2.1	All types of soil		-	-	-		-
a)	23.2.1.3	400 mm dia	Metre	80	648.70	51,896.00		-
	23.2.2	Rocky strata including Boulders		-	-	-		-
b)	23.2.2.3	400 mm dia	Metre	40	1,218.55	48,742.00		-
				-	-	-		-
8.07	23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	Cum	20	1,175.60	23,512.00		-
8.08	23.10	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		-	-	-		-
a)	23.10.3	200 mm nominal size dia having minimum wall thickness 5.00 mm	Metre	320	1,525.90	4,88,288.00		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
8.09	23.11	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge		-	-	-		-
a)	23.11.3	200 mm nominal size dia	Metre	240	1,607.50	3,85,800.00		-
				-	-	-		-
8.10	23.12	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc.,all as per requirement and direction of Engineer-in-charge..	Hour	200	542.20	1,08,440.00		-
				-	-	-		-
8.11	23.13	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:		-	-	-		-
a)	23.13.3	200 mm dia	Each	4	231.75	927.00		-
				-	-	-		-
8.12	23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.		-	-	-		-
a)	23.14.3	200 mm clamp	Each	4	1,154.45	4,617.80		-
				-	-	-		-
8.13	23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).		-	-	-		-
a)	23.15.3	150 MM DIA	Each	4	253.95	1,015.80		-
				-	-	-		-
8.14		Submersible pumps		-	-	-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		Providing and installing submersible pump and electrical panel suitable for 200 mm 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 300-500 LPM at 150 m head along with a directly coupled submersible type squirrel cage electric induction 10 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 electrical 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 submit 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	4		-	2,50,000.00	10,00,000.00
8.15	NS	Carrying out Electrical logging of Borewell before lowering of pipe for analysiing of water quality including Electrical logging report, calculation etc. 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	Job	4		-	30,000.00	1,20,000.00
				-		-		-
		SUBTOTAL (BOREWELL)		-		19,14,479.00		11,20,000.00
9.00		RAIN WATER HARVESTING-20 nos		-				
9.01	23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, repairing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level						
		All types of soil		-				
a)	23.1.1.3	400mm	Metre	400	518.95	2,07,580.00		-
	23.1.2	Rocky strata including Boulders		-		-		-
b)	23.1.2.3	400 mm dia	Metre	80	1,034.50	82,760.00		-
				-		-		-
9.02	23.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.						
a)	23.3.2	150 mm dia	Metre	200	572.30	1,14,460.00		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
9.03	23.4	Supplying, assembling, lowering and fixing in vertical position in bore well unplastized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.		-		-		-
a)	23.4.2	150 mm nominal size dia	Metre	200	529.35	1,05,870.00		-
				-		-		-
9.04	23.5	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge	Cum	60	921.90	55,314.00		-
				-		-		-
9.05	23.6	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	Cum	60	1,038.05	62,283.00		-
				-		-		-
9.06	23.7	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -incharge.	Cum	60	1,038.05	62,283.00		-
				-		-		-
9.07	23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge	Cum	40	1,175.60	47,024.00		-
				-		-		-
9.08	23.9	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge	Each	20	959.35	19,187.00		-
				-		-		-
9.09	NS-1	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 .)city condition.	Each	20		-	80,000.00	16,00,000.00
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
9.10		Supply, installing, testing and commissioning vertical fully floodable type submersible drainage pump of non-corrosive material in close coupled design single stage, suitable for handling minimum 25 mm dia solids for transferring waste water 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.		-		-		-
		Material of Construction (M.O.C): Corrosion Resistant in general : Casing — Cast Iron		-		-		-
		: Impeller — C.I.		-		-		-
		: 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		-		-		-
				-		-		-
a)	NS-2	350 LPM against 20 M head (Rain water tank to raw water tank & external storm water drain)	Each	4		-	1,94,444.00	7,77,776.00
b)	NS-3	Supply and installation of perforated SS enclosure suitably sized to house above pumps to filter solids particles for pump suction not more than 10 mm as per direction of Engg. In-charge	SQM	12		-	7,905.00	94,860.00
				-		-		-
		SUBTOTAL (RAIN WATER HARVESTING)		-		7,56,761.00		24,72,636.00
				-		-		-
10.00		EXTERNAL SEWERAGE AND DRAINAGE(except Around Building)		-		-		-
10.01	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		-		-		-
a)	19.2.2	150 mm diameter S.W. pipe/RCC NP2	Metre	2,746	622.95	17,10,620.70		-
b)	19.2.4	250 mm diameter S.W. pipe/RCC NP2	Metre	1,600	1,027.00	16,43,200.00		-
				-		-		-
10.02	19.3	Providing and laying cement concrete 1:5:10 (1 cement:5 coarse sand:10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design:		-		-		-
				-		-		-
a)	19.3.4	250 mm diameter S.W. pipe	Metre	1,000	656.60	6,56,600.00		-
b)	19.3.5	300 mm diameter S.W. pipe	Metre	1,200	757.60	9,09,120.00		-
c)	NS	450 mm diameter S.W.pipe	Metre	1,500		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-		-		-
10.03	19. 6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement:2 fine sand) including testing of joints etc. complete		-		-		-
a)	19.6.2	150 mm dia R.C.C. pipe	Metre	2,746	356.70	9,79,498.20		-
b)	19.6.3	250 mm dia R.C.C. pipe	Metre	2,600	482.05	12,53,330.00		-
c)	19.6.4	300 mm dia R.C.C. pipe	Metre	2,300	518.55	11,92,665.00		-
d)	19.6.5	450 mm dia R.C.C. pipe	Metre	2,170	720.95	15,64,461.50		-
e)	19.6.6	500 mm dia R.C.C. pipe	Metre	1,000	950.30	9,50,300.00		-
f)	19.6.8	700 mm dia R.C.C. pipe	Metre	650	1,582.85	10,28,852.50		-
g)	19.6.9	800 mm dia R.C.C. pipe	Metre	410	1,770.85	7,26,048.50		-
				-		-		-
10.04	19. 35	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C.pipes including collars/spigot 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)	19.35.1	450 mm dia R.C.C. pipe	Metre	500	1,936.00	9,68,000.00		-
b)	19.35.2	600 mm dia R.C.C. pipe	Metre	600	2,517.85	15,10,710.00		-
c)	19.35.3	900 mm dia R.C.C. pipe	Metre	650	3,964.45	25,76,892.50		-
d)	19.35.4	1000 mm dia R.C.C. pipe	Metre	100	4,905.35	4,90,535.00		-
				-		-		-
10.05	19. 9	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement: 3 coarse sand: 6 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design:		-		-		-
a)	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182kg., fixed in cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :		-		-		-
a i)	19.9.1.1	With F.P.S. bricks class designation 75	Each	115	8,683.75	9,98,631.25		-
				-		-		-
10.06	19. 10	Extra depth for circular type manhole 0.91m dia (at bottom) with beyond 0.91m to 1.67 m		-		-		-
a)	19.10.1	With F.P.S. bricks class designation 75	Metre	23	4,911.80	1,12,971.40		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
10.07	19.11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement: 4 coarse sand) inside cement plaster 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 nominalsize) fineished with a floating coat of neat cement complete as per standard design.		-		-		-
a)	19.11.1	1.68 m deep with SFRC cover and frame(heavy duty HD-20 grade designation) 560 mm internal diameter conforming to IS: 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominalsize) including centering shuttering all complete. (Excavation, foot rests and 12 mm tick cement plaster at the external surface shall be paid for separately)		-		-		-
a.i)	19.11.1.1	With F.P.S. bricks with class designation 75	Each	175	16,560.80	28,98,140.00		-
				-		-		-
10.08	19.12	Extra depth for circular type manhole 1.22 m internal dia (at bottom) with beyond 1.68 m to 2.29 m		-		-		-
a)	19.12.1	With F.P.S. bricks with class designation 75	Metre	33	6,362.65	2,09,967.45		-
				-		-		-
10.09	19.13	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 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 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		-		-		-
a)	19.13.1	2.3 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :		-		-		-
a i)	19.13.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	255	35,380.05	90,21,912.75		-
				-		-		-
10.10	19.14	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.3 m		-		-		-
a)	19.14.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	52	15,028.55	7,81,484.60		-
				-		-		-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
10.11	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS: 10910 on 12 mm dia steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per 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	3,650	327.90	11,96,835.00		-
				-		-		-
10.12	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement:4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design:		-		-		-
a)	19.27.1	With F.P.S. bricks	Each	450	4,043.10	18,19,395.00		-
				-		-		-
10.13	19.29	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		-		-		-
a)	19.29.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	210	7,522.15	15,79,651.50		-
				-		-		-
10.14	23.9	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations@ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineerin-charge	Each	350	959.35	3,35,772.50		-
				-		-		-
10.15	NS-1	Constructing brick masonry open surface drain including 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.		-		-		-
		300mm drain 450 mm average depth		-		-		-
a)		With F.P.S bricks	Metre	10		-	1,579.00	15,790.00
				-		-		-
10.16	NS-2	Supply, installation, testing & commissioning of Stainless Steel Perforated Bar Screen having Coarse Screen of 10 mm opening size and fine screen of 3 mm opening size suitable for a peak flowrate of 30 m3/Hr along with suitable lifting arrangement	Set	1		-	1,00,500.00	1,00,500.00

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-		-		-
10.17	NS-3	Providing and constructing masonry desilting chamber 2000mm x 1200mm with required depth inside with 75 class designated brick work in cement mortar 1:6 (1cement : 6 fine sand) with C.I double seal medium duty 560mm dia manhole cover (2Nos.). top slab 1:2:4 mix (1cement : 2coarse sand : 4 graded stone aggregate 20mm nominal size) with minimum 1.5% reinforcement, foundation concrete 1:5:10 (1cement : 5 fine sand:10 grade stone aggregate 20mm nominal size including baffle wall, necessary excavation, back filling and disposal of surface earth. Complete with inlet, outlet and overflow arrangement. Foot rest @400mm c/c, grating of required size with 16mm sq.bars and frame @20mm clear spacing fixed at month of pipe as per site conditions and direction of Engineer in charge	Each	2		-	40,000.00	80,000.00
				-		-		-
10.18	NS-4	Providing and laying Laboratory/hospital effluent waste pipe and fitting of high density polyethelene (HDPE),CLASS -PE 80 ,pressure rating PN-6,conforming to IS :4427, electric fusion joints/flanged joints , fittings and jointing						
		200 mm dia	Metre	150		-	2,520.00	3,78,000.00
				-		-		-
10.19	NS-5	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 10 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 — SS						
		: 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						
a)		150 LPM against 18 M head (Sewage pump)	Each	1		-	1,83,510.00	1,83,510.00

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1	2	3	4	5	6	7	8	9
b)		Electical panal cable,etc complete as per instruction of the Engineer in charge	Set	1		-	40,000.00	40,000.00
				-				
		SUB TOTAL(Sewerage , Storm & Drainage)		-		371,15,595.35		7,97,800.00
				-				
11.00		EARTH WORK		-				
11.01	2. 6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth,1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m , disposed earth to be levelled and neatly dressed.		-				
a)	2.6.1	All kinds of soil	Cum	2,104	125.95	2,64,998.80		-
				-		-		-
11.02	2. 10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:		-				-
a)	2.10.1	All kinds of soil		-		-		-
a.i)	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	Metre	9,758	225.45	21,99,941.10		-
a.ii)	2.10.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm dia	Metre	4,510	352.00	15,87,520.00		-
				-		-		-
11.03	2.11	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).	Metre	5,100	1.27	6,477.00		-
				-		-		-
11.04	2.12	Extra for excavating trenches for pipes, cables, etc, in all kinds of soil for depth exceeding 3 m in depth, but not exceeding 4.5 m. (Rate is over corresponding basic item for depth upto 1.5 metre.)	Metre	2,000	3.15	6,300.00		-
				-		-		-
11.05	2.16	Close timbering in trenches including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered).		-		-		-
a)	2.16.1	Depth not exceeding 1.5 m	sqm	4,150	108.55	4,50,482.50		-
b)	2.16.2	Depth exceeding 1.5 m but not exceeding 3 m	sqm	3,000	115.05	3,45,150.00		-
c)	2.16.3	Depth exceeding 3 m but not exceeding 4.5 m	sqm	1,000	129.80	1,29,800.00		-
				-		-		-
11.06	2.24	Extra rates for quantities of works, executed :		-		-		-
a)	2.24.1	In or under water and/or liquid mud, including pumping out water as required	metre depth	550	0.20	110.00		-
				-		-		-
11.07	2. 25	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	635.20	125.75	79,876.40		-
				-		-		-

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1	2	3	4	5	6	7	8	9
11.08	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.		-		-		-
a)	2.26.1	All kinds of soil	CUM	1,010	51.75	52,267.50		-
		SUB TOTAL(EARTH WORK)		-		51,22,923.30		-
12.00		WTP & PUMP ROOM WORKS		-				
A		WTP (for Domestic - Housing)		-				
12.01		Planning, Designing, Detailing, Manufacturing, Supplying, Erection, Testing and Commissioning of Water treatment plant for supply of treated water for use of domestic purpose comprising of filter and pumps. The plant is to be installed in pump room and Raw water supply is available in UGT including design and execution of all Civil, Structural, Electrical, Mechanical, Plumbing and processing, ancillary equipments & works etc required to complete the package, getting approval from HSCC/client etc.		-				-
		The shop drawings & design of WTP shall also be prepared in such a way that it comprise of the following units of required size as per detail design requirements. The work has to be carried through authorised vendor, dealer/representative of approved make.(lon exchange, Pollucon technologies, Thermax, geo miler).		-				-
a)		Providing and fixing vertical in line SS raw water filter feed pumps with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts,1500 RPM, 3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts, pressure gauge on delivery side etc. with suction strainer (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)		-				-
		Raw water filter feed pumps(only for domestic use).		-				-
		Capacity : 400 lpm (Each)		-				-
		Head 35 m		-				-
		Power : 7.5 HP		-				-
		with 100% standby pumps(1W+1S) 2 Nos.		-				-
b)		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks. (Make: Leader / Zoloto / Kartar or equivalent)		-				-
		50/80 mm dia (min.) or required size and required number(1 Set)		-				-
				-				-
c)		Providing and fixing gun metal or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete . (Make: Leader/ Zoloto or equivalent)		-				-
		80/50 mm NB (min.) or required size and number(1 Set)		-				-
				-				-

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1	2	3	4	5	6	7	8	9
d)		Providing and fixing heavy duty floating flange EPDM rubber expansion bellows with unit control (tie rod & gusset plate) as per manufacturers specifications of standard length complete with all accessories and a working pressure not less than 16 Kg./sqcm including rubber gaskets, flanges, nuts, bolts & washers complete as required.		-				-
		80/50 mm NB (min.) or required size and 2 numbers(1 on suction and 1 on delivery)		-				-
				-				-
e)		Filtration Plant : Vertical Down flow Multigrade Pressure Sand Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :		-				-
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.		-				-
		b) Initial charge of Filter Media.		-				-
		c) Complete underdrain system and raw water distributor as per manufacturer's design.		-				-
		d) M.S. heavy class fabricated - epoxy coated / post galvanized face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.		-				-
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.		-				-
		f) All internal parts of the filtration plant shall be coated with two coats of food grade epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide / zinc chromate primer followed by two coats of high gloss enamel paint .		-				-
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.		-				-
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor, dealer/representative of approved make. The filter water will be supplied to treated water tank through activated carbon filter, Softener & UV water steriliser.		-				-
		Capacity - 400 lpm		-				-
		Filtration rate - 20,000 lph/sqm (min.)		-				-
		Filter dia approx. 1.50 m (min.)		-				-
		Filter HOS Min. : 1600 mm (min.)		-				-
		Working pressure : 3.0 Kg/sq cm.		-				-
		Test pressure : 4.5 Kg/sq cm		-				-
		No. Of Unit - 1 Set		-				-
				-				-

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1	2	3	4	5	6	7	8	9
f)		Filtration Plant : Activated Carbon Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :		-				-
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.		-				-
		b) Initial charge of Activated Carbon		-				-
		c) Complete underdrain system and raw water distributor as per manufacturer's design.		-				-
		d) M.S. heavy class fabricated - epoxy coated / post galvanized face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.		-				-
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.		-				-
		f) All internal parts of the filtration plant shall be coated with two coats of food grade epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide / zinc chromate primer followed by two coats of high gloss enamel paint .		-				-
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.		-				-
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor, dealer/representative of approved make. The water shall be received from pressure sand filter and supplied to softener & through UV steriliser before being sent to treated water tank.		-				-
		Capacity - 400 lpm		-				-
		Filtration rate - 20,000 lph/sqm (min.)		-				-
		Filter dia approx. 1.50 m (min.)		-				-
		Filter HOS Min. : 1600 mm (min.)		-				-
		Working pressure : 3.0 Kg/sq cm.		-				-
		Test pressure : 4.5 Kg/sq cm		-				-
		No. Of Unit - 1 Set		-				-
				-				-
g)		UV WATER STERILISERS(between filter &clear water tank)		-				-
		High performance on line UV water sterilizers of capacity 400 lpm designed on at least 250 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 400 lpm, minimum lamp rating :150 watts - 1 Nos.		-				-
				-				-
h)		Providing and fixing G.I.pipes/CPVC pipes to I.S. 3589/1239 (Heavy class) with G.I./CPVC Fittings e.g., Tee, elbow reducers, unions, end cap etc., flanges & clamps, including supporting the pipes with G.I. supports, cutting and making good the walls etc. complete. For Suction & Delivery headers.		-				-

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1	2	3	4	5	6	7	8	9
		50 mm dia (min.) (Interconnection between units)/ Drain lines etc. as per plant room requirement. (All piping and fitting of required size inside the plant room included in the item)		-				-
				-				-
	i)	Painting G.I./CPVC pipes with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved priming coat as directed by the Project-in-charge (shade as per pipe colour code).		-				-
				-				-
	NS	Complete W.T.P as mentioned above including testing, training and trial run till commissioning of W.T.P. [Total of Sub Head WTP(a) to (i)]	SET	1			28,96,491.00	28,96,491.00
				-				-
12.02		Providing and fixing of Oxilyte (Mixed Oxidant) Generation System , based on ECA technology, producing non toxic mixed oxidant solution 30 Ltrs/hr at 1000 ppm of Oxidant concentration with auto flushing system . The solution should be at a pH 3+-0.5 suitable for 24x7 operations should produce 720 L per day. The system should be supplied complete with appropriate dosing pumps, valves, piping, fittings, chemical dosing tank etc. complete in all respect(shope drawing model and technical data etc. are to be submitted for approval before purchase). The system shall install to dose the oxylite solution in the treated water transfer pumping main and synchronised with the operation of transfer pump	SET	4			15,00,000.00	60,00,000.00
				-				-
12.03		STRUCTURAL STEEL WORK		-				-
a)	NS	Supply, fabrication, erection, painting of pipe supports of structural steel, for piping work in the production areas and anchoring them. 2 coats of zinc chromate primer and one coat of finishing paint	Kgs.	450			60.00	27,000.00
				-				-
12.04		Supplying, assembly, erection, testing and commissioning of level controllers based on level switches and necessary auxiliary circuits included in the electric panel ,including all accessories required for the performance of the system to the satisfaction of the engineer in charge complete including providing and fixing wiring from control panel to the level switches of required size, all interconnections as required . Note : The required transformers / associated equipment shall be designed keeping in view the actual distance of various tanks from the control panel, particularly the distance of Terrace water tank from panel. The most suitable route of sensor cable travel between the panel and the tank shall have to be worked out by the contractor according to site conditions and in consultation with engineer in charge. All cabling / switch installation should be done in an easy to maintain manner.		-				-
		One way one tank level controller as under.	SET	2			15,000.00	30,000.00
a)	NS	To switch on the tube well pump when the level of water in the UG raw water tank is low and to cut off the pump when the level in the underground raw water tank is high. (Approx. control cable requirement -200 meters.)		-				-
		Two way - Two tank level controller as under.	SET	2			15,000.00	30,000.00
b)	NS	For Filter Feed Pumps for Domestic Water.(Operating between the raw water tank and the under ground treated water tank near the plant room. (Approx. control cable requirement - 100 meters.)	SET	2			15,000.00	30,000.00

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1	2	3	4	5	6	7	8	9
c)	NS	For Treated water supply Pumps(Operating between the under ground treated water tank near the plant room and the Terrace treated water tank . (Approx. control cable requirement - 150 meters.)	SET	2			15,000.00	30,000.00
				-				-
12.05		Providing and fixing gun metal foot valve with stainer of approved quality/model complete in all respect		-				-
a)	NS	80 mm dia	Each	2			19,565.00	39,130.00
b)	NS	100 mm dia	Each	2			29,310.00	58,620.00
				-				-
12.06	NS	Providing, fixing and testing of packaged type skid mounted hydropneumatic with VFD on every pump, system type comprising of :-		-				-
		(i) Design, engineer, procure, supply, test and commission a pre-engineered, factory fabricated, assembled & tested, fully integrated, highly efficient pump, IE2 motors, skid mounted, complete ready-to-connect packaged pressure booster station, complete with vertical multi stage centrifugal pumps connected in parallel, high efficiency IE2 motors, intelligent multi-pump controller, the controller shall be mounted in a control cabinet with an IP 55 enclosure of suitable rating; SS304 suction and delivery manifolds; isolation ball valves on suction and discharge of each pump; non return valve on discharge side of each pump; hot dip galvanised common base frame; and diaphragm pressure vessel PN10		-				-
		(ii) The pump shall have cast iron head and base, SS304 impeller, SS304 Casing, SS316 Shaft		-				-
		(iii) The motor shall be of efficiency class IE2, insulation class F, enclosure class IP55, capable of operation at 3 phase, 50 Hz, 380-415 V, with built-in thermistor PTC		-				-
		(iv) Pressure vessel of non corrosive SS304 Food Grade. Air cell burst pressure of minimum of 5 times the vessel operating pressure and cycle tested for 2,50,000 cycles with minimum capacity of 100 Litres		-				-
		(v) Control Panel to be of enclosure class IP41, with programmable logic controller (PLC) for cyclic operation of pumps. Pump working sequence should change after every operation.Contractractor overload relays and MCBs should confirm to IEC 898 – 1995/ specifications. Blinking indications for pumps start, trip, low level trip, health supply should be provided in the panel along with the ammeter & voltmeter. Control panel should also consist of cooling fan.		-				-
				-				-

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1	2	3	4	5	6	7	8	9
		(vi) Pressure tank capacity: (as per manufacturer recommendation) Note: Back up calculation need to be provided for the same. A pre-charged Carbon Steel body diaphragm tank shall be fitted to the discharge pipe with a compatible Butyl-rubber diaphragm. It shall supply water a very low flows to minimize frequent pump start and stop and water hammering. There shall be complete separation between water and air and there should be no contact between water and tank compounds to avoid corrosion. Bladders shall be suitable for sufficient elasticity to permit full expansion inside the tank to ensure better performance and longer working life.		-				-
		(vii) Pressure switches bellow type fitted with micro switch and having maximum pressure and differential scale should confirming BS-6134 standards and IP55 protection class.		-				-
		(viii) Ball valves to be used should be Hot Pressed brass OT-58 with stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be used should be with Springs and O-Ring arrangement.		-				-
		Pressure Transmitter (0-10/16/25bar, based on system design pressure)		-				-
		Pressurge Gauge - 0-16bar		-				-
		Suction & Delivery Manifolds - SS304		-				-
		One non-return valve and isolating valves for each pump is provided in delivery side and one isolating valve is provided in suction side.		-				-
		Complete set system to be mounted on a common base frame and shall follow following duty.		-				-
a)		Domestic water Hydropneumatic pumps		-				-
		Bladder Vessel : 200 lit		-				-
		Skid Assembly with butterfly valves to isolate each pump,NRV for each pump, suction and discharge manifold in GI.Y strainer at suction of pump set with butterfly valve.		-				-
		Starter VFD (IP 55 rated) for each pump with Microprocessor panel with wiring upto pumps and VFDs with Control Panel mounted on skid		-				-
a)	NS	Complete as mentioned above including testing, training and trial run till commissioning of hydropneumatic pump, system.(Head : 85 M, no. of pumps: 3(2w+1s), flow per pump : 600 LPM, System Peak Flow : 1200 LPM)	SET	1			14,43,389.00	14,43,389.00
b)	NS	Complete as mentioned above including testing, training and trial run till commissioning of hydropneumatic pump, system.(Head : 60 M, no. of pumps: 3(2w+1s), flow per pump : 250 LPM, System Peak Flow :500 LPM)	SET	1			9,55,440.00	9,55,440.00
				-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
12.07		Providing and fixing vertical in line SS centrifugal pumps with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts,1500 RPM, 3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts, pressure gauge on delivery side etc. with suction strainer (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)		-				-
		Flushing Pump in Main UGT to connect to flushing ring line		-				-
		Capacity : 600 lpm (Each)		-				-
		Head 85 m		-				-
		Power : 20.0 HP		-				-
		with 100% standby pumps(1W+1S) 2 Nos.		-				-
		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks. (Make: Leader / Zoloto / Kartar or equivalent)		-				-
		50/80 mm dia (min.) or required size and required number(1 Set)		-				-
				-				-
		Providing and fixing gun metal or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete . (Make: Leader/ Zoloto or equivalent)		-				-
		80/50 mm NB (min.) or required size and number(1 Set)		-				-
				-				-
		Providing and fixing heavy duty floating flange EPDM rubber expansion bellows with unit control (tie rod & gusset plate) as per manufacturers specifications of standard length complete with all accessories and a working pressure not less than 16 Kg./sqcm including rubber gaskets, flanges, nuts, bolts & washers complete as required.		-				-
		80/50 mm NB (min.) or required size and 2 numbers(1 on suction and 1 on delivery)		-				-
a)	NS	Complete as mentioned above including testing, training and trial run till commissioning of hydropneumatic pump, system.(Head : 85 M, no. of pumps: 2 (1w+1s), flow per pump : 600 LPM	SET	1			3,10,500.00	3,10,500.00
b)	NS	Complete as mentioned above including testing, training and trial run till commissioning of hydropneumatic pump, system.(Head :60 M, no. of pumps: 2 (1w+1s), flow per pump : 150LPM	SET	1			2,50,400.00	2,50,400.00
				-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
12.08		Supply, installing, testing and commissioning vertical fully floodable type Submersible drainage pump of non-corrosive material in close coupled design single stage, suitable for handling minimum 10 mm dia solids for transferring waste water 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 protection and single phase preventer.		-				-
		Material of Construction (M.O.C): Corrosion Resistant in general : Casing — Cast Iron		-				-
		: Impeller — SS		-				-
		: 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		-				-
		450 LPM against 12 M head - For Pump Room Drainage (1+1)		-				-
a)	NS	Complete as mentioned above including testing, training and trial run till commissioning of pump, system.	SET	2			1,16,000.00	2,32,000.00
				-				-
12.09	NS	Testing Underground tank for water seepage before fixing of tiles or any other finishing including pressure grouting (if required). The tank should be disinfected and cleaned before use as per instruction of Engineer-in-charge(up to 5 lac ltr tank)	SET	2			15,000.00	30,000.00
B		WTP (for Domestic - OPD)		-				-
12.10		Planning, Designing, Detailing, Manufacturing, Supplying, Erection, Testing and Commissioning of Water treatment plant for supply of treated water for use of domestic purpose comprising of filter and pumps. The plant is to be installed in pump room and Raw water supply is available in UGT including design and execution of all Civil, Structural, Electrical, Mechanical, Plumbing and processing, ancillary equipments & works etc required to complete the package, getting approval from HSCC/client etc.		-				-
		The shop drawings & design of WTP shall also be prepared in such a way that it comprise of the following units of required size as per detail design requirements. The work has to be carried through authorised vendor, dealer/representative of approved make.(Ion exchange, Pollucon technologies, Thermax, geo miler).		-				-
				-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
a)		Providing and fixing vertical in line SS raw water filter feed pumps with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts,1500 RPM, 3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts, pressure gauge on delivery side etc. with suction strainer (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)		-				-
		Raw water filter feed pumps(only for domestic use).		-				-
		Capacity : 250 lpm (Each)		-				-
		Head 35 m		-				-
		Power : 7.5 HP		-				-
		with 100% standby pumps(1W+1S) 2 Nos.		-				-
b)		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks. (Make: Leader / Zoloto / Kartar or equivalent)		-				-
		50/80 mm dia (min.) or required size and required number(1 Set)		-				-
				-				-
c)		Providing and fixing gun metal or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete . (Make: Leader/ Zoloto or equivalent)		-				-
		80/50 mm NB (min.) or required size and number(1 Set)		-				-
				-				-
d)		Providing and fixing heavy duty floating flange EPDM rubber expansion bellows with unit control (tie rod & gusset plate) as per manufacturers specifications of standard length complete with all accessories and a working pressure not less than 16 Kg./sqcm including rubber gaskets, flanges, nuts, bolts & washers complete as required.		-				-
		80/50 mm NB (min.) or required size and 2 numbers(1 on suction and 1 on delivery)		-				-
				-				-
e)		Filtration Plant : Vertical Down flow Multigrade Pressure Sand Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :		-				-
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.		-				-
		b) Initial charge of Filter Media.		-				-
		c) Complete underdrain system and raw water distributor as per manufacturer's design.		-				-
		d) M.S. heavy class fabricated - epoxy coated / post galvanized face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.		-				-
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.		-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		f) All internal parts of the filtration plant shall be coated with two coats of food grade epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide / zinc chromate primer followed by two coats of high gloss enamel paint .		-				-
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.		-				-
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor, dealer/representative of approved make. The filter water will be supplied to treated water tank through activated carbon filter, Softener & UV water steriliser.		-				-
		Capacity - 250 lpm		-				-
		Filtration rate - 20,000 lph/sqm (min.)		-				-
		Filter dia approx. 0.90 m (min.)		-				-
		Filter HOS Min. : 1600 mm (min.)		-				-
		Working pressure : 3.0 Kg/sq cm.		-				-
		Test pressure : 4.5 Kg/sq cm		-				-
		No. Of Unit - 1 Set		-				-
				-				-
f)		Filtration Plant : Activated Carbon Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :		-				-
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.		-				-
		b) Initial charge of Activated Carbon		-				-
		c) Complete underdrain system and raw water distributor as per manufacturer's design.		-				-
		d) M.S. heavy class fabricated - epoxy coated / post galvanized face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.		-				-
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.		-				-
		f) All internal parts of the filtration plant shall be coated with two coats of food grade epoxy paint after thorough sand blasting. All external surfaces of the plant including piping shall be coated with two coats of red iron oxide / zinc chromate primer followed by two coats of high gloss enamel paint .		-				-
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.		-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor, dealer/representative of approved make. The water shall be received from pressure sand filter and supplied to softener & through UV steriliser before being sent to treated water tank.		-				-
		Capacity - 250 lpm		-				-
		Filtration rate - 20,000 lph/sqm (min.)		-				-
		Filter dia approx. 1.50 m (min.)		-				-
		Filter HOS Min. : 1600 mm (min.)		-				-
		Working pressure : 3.0 Kg/sq cm.		-				-
		Test pressure : 4.5 Kg/sq cm		-				-
		No. Of Unit - 1 Set		-				-
	g)	UV WATER STERILISERS(between filter &clear water tank)		-				-
		High performance on line UV water sterilizers of capacity 250 lpm designed on at least 250 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 400 lpm, minimum lamp rating :100 watts - 1 Nos.		-				-
				-				-
	h)	Providing and fixing G.I.pipes/CPVC pipes to I.S. 3589/1239 (Heavy class) with G.I./CPVC Fittings e.g., Tee, elbow reducers, unions, end cap etc., flanges & clamps, including supporting the pipes with G.I. supports, cutting and making good the walls etc. complete. For Suction & Delivery headers.		-				-
		50 mm dia (min.) (Interconnection between units)/ Drain lines etc. as per plant room requirement. (All piping and fitting of required size inside the plant room included in the item)		-				-
				-				-
	i)	Painting G.I./CPVC pipes with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved priming coat as directed by the Project-in-charge (shade as per pipe colour code).		-				-
				-				-
	NS	Complete W.T.P as mentioned above including testing, training and trial run till commissioning of W.T.P. [Total of Sub Head WTP(a) to (h)]	SET	1			25,00,000.00	25,00,000.00
				-				-
12.11		Softner For HVAC-OPD		-			-	-
		Planning, Designing, Detailing, Manufacturing, Supplying, Erection, Testing and Commissioning of Water treatment plant for supply of treated water for use for domestic purpose comprising of filter and pumps. The plant is to be installed in pump room at basement level and Raw water supply is available in UGT including design and execution of all Civil, Structural, Electrical, Mechanical, Plumbing and processing, ancillary equipments & works etc required to complete the package, getting approval from HSCC/client etc.		-			-	-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		The shop drawings & design of WTP shall also be prepared in such a way that it comprise of the following units of required size as per detail design requirements. The work has to be carried through authorised vendor, dealer/representative of approved make (Ion exchange, Pollucon technologies, AKAR Impex,Thermax, Aquaprocess).		-			-	-
		Providing and fixing horizontal/ vertical on line single/multi-stage raw water filter feed pumps mounting on a foundation with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts, 1500 RPM,3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts etc. with suction stainer (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)		-			-	-
		Water Softener feed pump		-			-	-
		Capacity : 400LPM		-			-	-
		Head 35 m		-			-	-
		Power : 10HP or as required		-			-	-
		with 100% standby pumps(1W+1S)(The one set of the system will comprise the cost of 2 nos. pumps)		-			-	-
				-			-	-
		Providing and fixing GI/CPVC epoxy coated pipe & fittings and specials for suction and discharge side of pumps as required to connect Suction strainers and isolation butterfly valves on suction side and isolation valves and NRVs on discharge size , and to make a common discharge header from all pumps. Individual pump suction and discharge size minimum : 80 mm x 65 mm. The pumps shall have 100 mm NB butterfly valves and 100 mm NB flanged Y type strainers on suction side and common discharge header size : 80 mm NB including required numbers of matching flange, bolts, nuts, rubber gaskets, all complete as required / as per drawings or specifications. (complete lot)		-			-	-
				-			-	-
		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks. (Make: Leader / Zoloto / Castle or equivalent)		-			-	-
		80/100 mm dia (4 nos.) (min.) or required size and required number		-			-	-
				-			-	-
		Providing and fixing G / M or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete . (Make: Leader/ Zoloto/Castle or equivalent)		-			-	-
		80/65 mm NB (min.) or required size and number		-			-	-
				-			-	-
		Filtration Plant : Vertical Downflow Multigrade Pressure Sand Filter in MS Welded construction fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8 mm thick M.S. plate on dished ends as per applicable IS standards. The filter shall have :		-			-	-
		a) One no pressure tight manhole and at least one no. pressure tight side hole for maintenance purposes.		-			-	-
		b) Initial charge of Filter Media.		-			-	-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		c) Complete underdrain system and raw water distributor as per manufacturer's design.		-			-	-
		d) M.S. heavy class fabricated - epoxy coated / post galvanised face piping comprising of connections with CI Butterfly Valves of required size for inlet, outlet, backwash inlet, backwash drain and rinse drain. Air release line with GM Ball Valve of required size.		-			-	-
		e) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.		-			-	-
		f) All internal parts of the filtration plant shall be coated 6 mm thick natural rubber lining after thorough sand blasting. All external surfaces of the plant including piping shall be coated with epoxy primer followed by two coats of high gloss epoxy paint .		-			-	-
		g) The filter shall be complete with all gaskets / fasteners of standard quality as required.		-			-	-
		h) The filter shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein. The work has to be carried through authorised vendor, dealer/representative of approved make (Ion exchange, Pollucon technologies, AKAR Impex, Thermax, Aquaprocess, LN Tech). The filter water will be supplied to Softner before collecting in treated water tank.		-			-	-
		Capacity - 400LPM		-			-	-
		Filtration rate - 20,000 lph/sqm (min.)		-			-	-
		Filter dia approx. 1500 mm (min.)		-			-	-
		Filter HOS Min. : 1600 mm (min.)		-			-	-
		Working pressure : 3.0 Kg/sq cm.		-			-	-
		Test pressure : 4.5 Kg/sq cm		-			-	-
		Providing and fixing, testing and commissioning M.S. Vertical Upflow "Cation" Ion Exchange water Softener fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate on shell and minimum 8mm thick M.S. plate on dished ends as per applicable IS standards. The vessel shall be internally lined with 6.00 mm thick rubber, tested to 60 - 80 shore hardness, 15000 RMS volts spark test for continuity. The softener shall have :		-			-	-
		a) Strainer plates at top and bottom with P.P. strainers with removable nuts and check nuts fixed on the plates.		-			-	-
		b) GI/CPVC heavy class fabricated internally rubber lined face piping comprising of connections with CI Diaphragm Valves of required size for inlet, outlet, and rinse drain etc.		-			-	-
		c) Regeneration assembly comprising of power valve, ejector, brine suction valve, and all necessary piping incorporated into the main pipework.		-			-	-
		d) Pressure gauges (100 mm dia bourdon type pressure gauge) / Sampling points with SS isolation cocks at inlet and outlet.		-			-	-
		e) All external surfaces of the plant including piping shall be coated with epoxy primer followed by two coats of high gloss epoxy paint .		-			-	-
		f) The softener shall be complete with all gaskets / fasteners of standard quality as required.		-			-	-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		g) Initial charge of Ion Exchange resin.		-			-	-
		h) The softener shall be designed to give rated output at given raw water quality and flow rate without any operational problem and should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision is required to make the item complete, the same should be included herein.		-			-	-
				-			-	-
		i) M.S. rubber lined vertical, cylindrical self supporting open tank for salt mixing and brine saturation with air agitation arrangement comprising of G. I. heavy class air distributor laid at the bottom of tank, roots type air blower complete in all respects of suitable capacity to agitate the required quantity of brine, piping interconnection between air blower and air distributor. The brine tank to have nozzles for outlet, overflow and drain. Outside finished with high gloss enamel paint over two coats of zinc chromate primer complete including testing and commissioning. Net usable capacity of the tank excluding free board etc., should be at least 10 % more than actual capacity required.		-			-	-
		Capacity of softening plant : 400 LPM		-			-	-
		Raw Hardness : 700-1200 mg/l.		-			-	-
		Regeneration period interval not less than 8 hr.		-			-	-
		Quantity of soft water between two regenerations =250KL		-			-	-
		Approximate Dia =1500 mm, HOS 1600 mm (min.) or as required		-			-	-
		Type of Resin : Strongly acidic cation resin		-			-	-
		Make of Resin : Ion Exchange / Rohm & Haas		-			-	-
		Min. qty. of resin :2100 Ltrs.		-			-	-
		Operating pressure : 3.0 kg/sqcm		-			-	-
		Test pressure : 5.50 kg/sqcm (Set-1)		-			-	-
		Soft water quality: Commercial zero hardness		-			-	-
		Providing and fixing G.I.pipes/CPVC pipes to I.S. 3589/1239 (Heavy class) with G.I./CPVC Fittings e.g., Tee, elbow reducers, unions, end cap etc., flanges & clamps, including supporting the pipes with G.I. supports, cutting and making good the walls etc. complete. For Suction & Delivery headers.		-			-	-
		65/80 mm dia (min.) (Interconnection between units)/ Drain lines etc. as per plant room requirement. (All piping and fitting of required size inside the plant room included in the item)		-			-	-
				-			-	-
		Painting G.I./CPVC pipes with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved priming coat as directed by the Project-in-charge (shade as per pipe colour code).		-			-	-
		80 mm dia (min.) (as per required length)		-			-	-
		Complete softner as mentioned above including testing, training and trial run till comissioning of W.T.P. (domestic use)	SET	1			23,00,000.00	23,00,000.00
		SUB TOTAL(WATER TREATMENT PLANT)		-		-		171,62,970.00
13.00		EFFLUENT TREATMENT PLANT(ETP) -For OPD		-				

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
13.01		Providing and fixing packaged type Effluent treatment plant including design/shop drawing and obtain the approval from HSCC,erection,commissioning,construction of ETP including civil,mechanical,electrical,piping work complete in all respect on turnkey basis.The system should be fully automatic with level control,compact,odor free and shall consume low power. ETP will be placed near STP site of the building of suitable size for 15 KLD required to treat the effluent of lab,laundry,kitchen and hospital facilities by using suitable technology complete in all respect including oil and grease trap/chemical reaction with suitable chemical dosing such as Fentons reagent or any other suitable for effluent/mixer/settler/neutralisation chamber,dosing pump and agitator ,holding tank,including multigrade filter stand by motor pump,blower etc. pumps and piping,filter,sludge holding tank,filter press,testing kit,electrical panel,air blower,RCC Equilisation tank/holding tank.Treated water transfer pump and sump of suitable c.			-			-
		.Agency has to monitor the lab waste effluent for various parameter and quantity obtaining desired no. of test reports of raw/treated lab effluent The ETP work includes pumps,blower,raw and treated water tank PVC,electric Panel, electric wire inside the ETP area, 1 No. mixed oxident generation system based on ECA Technology of approved make 30 Ltrs/hr capacity. SS Agetor in reactor Tanks, Dosing pumps & tanks , ladder,working platform,painting,interconnecting pipe valve,foundation, support etc., complete in all respect(all pump shall be SS impler & adequate solid handling capacity, Mechanical Seal).			-			-
		All the unit of ETP shall be MS sheet min. 4/5 mm thickness with suitable structure support complete in all respect including min2-.3 layers approved epoxy / FRP or other approved corrosion resistant coating/protection of all parts.The ETP units shall be designed in such a way that the lab effluent doesnot effect the function of STP when treated lab effluent mixed in the domestic sewer line,treated effluent shall meet the SPCB norms and also obtain adequacy report and treated effluent test report for SPCB. Agency has to maintain and operate the ETP during defect liability period including cost of manpower,chemical etc except electricity cost.Work shall be carried out by specialised agency / authorized Vender of ETP (Geo Miler & Co, Ion-Exchange, Oxybee, Pollucon Technologies, Thermax,) authorized Vender will be required to produce documents in support of their authorization from the specialised agency. The work shall be carried out by trained authored staff of the company. (excluding cost of civil wo.	Each	1			30,00,000.00	30,00,000.00
					-			-
		Subtotal (Effluent Treatment Plant)			-			30,00,000.00
					-			
14		SEWAGE TREATMENT PLANT (Residential)			-			
					-			

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
14.01		Planning,Designing,Detailing,Supplying, Erection,Testing and Commissioning of Sewage treatment plant based on MBBR (Moving bed Bio Reactor)/FAB technology of average flow rate of 500 cu.m/day (2 streams) for sewer including provision of recirculation of treated sewage/effluent for the use of horticulture/flushing/A/c purposes including design and execution of all civil,structural,electrical,mechanical, plumbing and processing, ancillary equipments and works etc required to complete the package, getting approval from state pollution control board and other statutory bodies as well as from consultant (consultant) /Client including the cost of STP building for electrical room, treated sewage under ground storage tank etc. STP shall be design in such a way that it has a provision to easy extension for phase-II load (appr. 500 KLD).The planning & designinghas to carried out for phase-I & II, HOWEVER THE EXECUTION WILL BE CARRIED OUT ON LY FOR PHASE -i .		-				
		All the water retaining structure shall be designed as water retaining structure as per provision of IS code and water proofing with fixed or any other approved chemical shall be carried out by approved agency with 10 year (minimum) guaranty. All the unit shall be painted by epoxy or fixed with the white glazed tiles of approved make. The civil works of entire STP will be carried out by agency as per drawings prepared by STP E&M agency. The shop drawings & design of STP shall also be prepared in such a way that it comprise of the following units of required size as per detail design requirements & meeting the following requirements The work has to be carried by approved make agency / through authorised vendor/dealer of approved make under overall supervision of main approved agency as per list of approve make (lon exchange, Pollucon technologies, Thermax, geo miler).		-				
a)		The shop drawings & design of STP shall be prepared by the agency . As per site condition/available space most of the unit will be placed below ground under road/green area/ as per site condition and equipment and Panel room may be above the ground level as per approved drawings .The STP shall be comprising of the following units of required size as per detail process and hydraulic design. The structure design shall be carried as per provision of IS code. The agency has to get their structure drawing checked and approved by any govt. Engineering college approved by consultant. (Set-1)		-				
b)		RCC Suitable size mechanical Bar Screen chamber with minimum free board 300 mm and minimum size 1.5 mx1.0mx0.40 m SWD and additional manual suitable size SS Bar screen is installed at suitable angle at the inlet of raw sewage sump before pumping and mechanical system to collect and lifts/transport the screening material . The unit shall be designed for peak flow , and one no. SS slotted additional manual fine screen 2 mm thick after mechanical bar screen to be fixed in chamber itself. Inlet chamber of suitable size with SS manual operated spindle riser SS 304 gate shall also be provided before Bar Screen.		-				
i.		Complete mechanical Bar Screen and SS slotted fine screen Electrical & mechanical Works , screening material collection and lifting system upto Ground formation level (excluding civil works) (Set-1)		-				
				-				

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1	2	3	4	5	6	7	8	9
c)		RCC 2 nos., Suitable size Grit chamber with grit removal arrangement at one end of the chamber operated at a fixed interval. The grit chamber shall be suitable for surface overflow rate 959 m ³ / m ² / day, The unit shall be designed for peak flow.		-				
		Cost of deflector (MOC- SS 304) at upstream and proportional flow weir (MOC-SS 304) at downstream of Grit Chamber.		-				
d)		Supply, installing, testing and commissioning vertical fully floodable type submersible drainage pump of non-corrosive material in close coupled design single stage, suitable for handling 40 mm(approx.) 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 preventer.		-				
		Material of Construction (M.O.C): Corrosion Resistant in general		-				
		: Casing — Cast Iron						
		: Impeller — Ductile cast iron/SS		-				
		: 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		-				
		RAW SEWAGE PUMP		-				
		Capacity -200LPM (min.)		-				
		Head - 15 m		-				
		Solid handling - 20-40mm		-				
i.		RAW SEWAGE PUMP Electrical & mechanical Works , excluding civil works (2 working+ 2 stand by) Total 4 Nos.		-				
ii.		Drainage Sump Pump-300LPM & 10 M head (2 Nos.)		-				
iii.		Sludge recirculation pump: 100 LPM & 10 m Head(2 Nos.)		-				
				-				
e)		RCC Equalization tank with hydraulic retention time Min.6 Hrs HRT of STP designing Average flow with suitable Size free Board 500 mm, the effluent of equalisation tank is agitated with diffused air that is fed by an air blower, including pipe non-corrosive material and its complete system.		-				
i.		Equalisation tank Electrical & mechanical Works , excluding civil works (Set-1)		-				
				-				

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1	2	3	4	5	6	7	8	9
f)		RCC Moving bed Bio Reactor (MBBR) with minimum 5hr. retention time of STP designing Average flow rate for each reactor of suitable size with Air grid CPVC/SS -304 pipe material of construction or corrosion resistant material, Air diffusers (fine bubble), HDPE approved make Bio media for each aeration tank, with minimum water depth of 3.8 m.(media - MM Acqua or approved by HSCC.		-				
i.		Moving bed Bio Reactor - Electrical & mechanical Works , excluding civil works -(4 nos.)		-				
g)		ROTARY AIR BLOWERS		-				
		Providing and Installation of Rotary air blowers for air scouring, driver through v-belt or directly coupled through flexible coupling. Motor shall be of suitable HP for 400-440 volts, ,1500RPM, 3 phase, along with air filter, non-return valve, safety valve, base plate and necessary air piping fittings, valves, flowmeters etc.		-				
		(Blower capacity - 100 cfm at 4000 mm wc(minimum) shall be provided as per detail design calculation. It is use for equalisation tank and MBBR reactor - (2 working +2 stand by) Blowers shall be fully automatic. with fine bubble Air diffusers (tubeler type, Rating -5 -6 cfm at normal working condition, MOC diaphragm- Neoprene/silicon) - Complete including Electrical & mechanical Works , excluding civil works. Make of diffuser - Rehau, Techpro , OTT, MM Aqua Make of Blowers- Kay, Everest , Usha , Swam		-				
i.		ROTARY AIR BLOWERS - Electrical & mechanical Works , excluding civil works(4 nos. Blower &etc)		-				
h)		RCC secondary tube settler/Lamella Clarifier - maximum Hydraulic loading 1.75 cu.m/sq.m/hr /1.5 cu.m/sq.m/hr. respectively and with approved quality media with minimum water depth of 2.4 m.+ Free board & hopper bottom. The lamina clarifier media shall be of acrylic plate min. 10 mm thick		-				
i.		Tube settler - Electrical & mechanical Works , excluding civil works (Set-2)		-				
i)		Providing and fixing of OxiLyte (Mixed Oxidant) Generation System, based on ECA Technology, producing non toxic mixed Oxidant Solution 30 ltrs/hr at 1000 ppm of Oxidant Concentration . The solution should be at a pH 3+-0.5 suitable for 24x7 operations should produce 720 litre per Day. The system should be supplied complete with appropriate dosing pumps , valves, piping, fittings, chemical dosing tank etc. complete in all respect. with auto flushing system.		-				
i.		OxiLyte (Mixed Oxidant) Generation System - Electrical & mechanical Works , excluding civil works (Set-2)		-				
j)		RCC supernatant tank /Filter feed tank minimum 2#50 cu.m capacity with following filter feed pumps -		-				
k)		FILTER FEED PUMPSETS		-				

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		Providing and installation vertical inline single/multistage centrifugal pumping set with CI body, SS impeller, coupled with totally enclosed fan cooled induction motor mounted on common structural base plate with all pump accessories complete as per specifications inclusive rubber vibration eliminators motor suitable for 415 volts, 1500RPM, 3 phase 50 HZ. A/c supply.		-				
		Type of pump - Horizontal		-				
		Capacity -300LPM (Mini.)		-				
		Head - 30 M		-				
		(2working +2stand by) - 4 nos.		-				
i.		Filter feed tank & Pumps - Electrical & mechanical Works , excluding civil works		-				
l)		MULTI GRADE FILTER		-				
		Providing and installation of mild steel pressure vessel (as per IS:2825) 6 mm thick natural rubber lining fabrication standard multi grade filter complete in all respects, with dished ends, supporting legs, manhole cover, frontal pipe work fitting with valves. Plant shall be provided with inlet, outlet pressure gauge, sample cocks, charge of filter media graded sand and internals consisting of strainers fitted on plate for collection.		-				
		Dia of vessel - 900 mm (minimum)&1.6 m height		-				
		Shell thickness -6mm (minimum.)		-				
		Filtration rate - 20,000 lph/sqm (min.) &		-				
		Dish end thickness-8mm (minimum.)		-				
		Nozzle plate -10mm thick (minimum.)		-				
		Manhole -450mm		-				
		Total capacity -300 LPM each Filter, complete (mini.)		-				
i.		MULTI GRADE FILTER - Electrical & mechanical Works , excluding civil works-2 nos.		-				
				-				
m)		ACTIVATED CARBON FILTER		-				
		Providing and installation of mild steel pressure vessel (as per IS:2825) 6 mm thick natural rubber lining fabrication standard multi grade filter complete in all respects, with dished ends, supporting legs, manhole cover, frontal pipe work fitting with valves. Plant shall be provided with inlet, outlet pressure gauge, sample cocks, charge of approved quality activated carbon media. Provision of backwash and recharging of activated carbon etc. complete		-				
		Depth of Activated carbon media- 1.0 m		-				
		Activated carbon type-(950 IV 4/8 mesh)		-				
		Dia of vessel -900mm (minimum)& 1.6 m ht.		-				
		Shell thickness -6mm (minimum.)		-				
		Dish end thickness-8mm (minimum.)		-				
		Nozzle plate -10mm thick (minimum.)		-				
		Manhole -450mm		-				
		capacity -300LPM,		-				
i.		ACTIVATED CARBON FILTER - Electrical & mechanical Works , excluding civil works-2 nos.		-				
				-				

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1	2	3	4	5	6	7	8	9
n)		RCC 2 nos. Suitable size sludge sump of min. capacity 20 cu.m with min. free board 500 mm. The sludge of sludge sump is agitated with diffused air that is fed by an air blower (Common for MBBR tank), including pipe non-corrosive material and its complete system.		-				
		Cost of Screw type sludge feed pump set with CI body, SS screw and shaft coupled with to a totally enclosed fan cooled induction motor complete with CPVC / SS 304 piping's, sluice valves, non return valves, fittings etc as required. Motor suitable for 415 volts, 3 phase 50Hz. A/c supply with control auto start float switch / level controller for automatic operation - Electrical & mechanical Works , excluding civil works (2 Nos.)		-				
		SLUDGE FEED PUMP-(2 Nos)		-				
		Capacity -100 LPM(minimum)		-				
		Head - 20 m		-				
i.		Type of pump - Screw type		-				
				-				
o)		Cost of centrifuge including drive, feeding arrangement, withdrawn arrangement, MOC- All wetted part SS 304, etc complete with PE Dosing System (Each set consist of 1 No. 500 ltr capacity dosing tank with 2 nos positive displacement dosing pump of min. capacity 50 LPH, CPVC / SS 304 pipings,valves, fittings etc as required(One set)		-				
		Capacity -100 LPM(minimum)		-				
		Type - Solid bowl		-				
		Make - Alfa, humboldt ,Penwalt		-				
p)		RCC 2 No. suitable size treated water tank of minimum 100 cu. M capacity with min.free board 500 mm(1 unit)		-				
		Treated Water Transfer Pump Sets		-				
				-				
q)		Ultra Filtration System (UF) - 1Sets		-				
				-				
i.		Supplying, installing, testing and commissioning of UF System piping and Valves with all the required accessories & chemical cleaning system, complete in all respects.		-				
				-				
ii.		UF Module (Hollow Fibre -outside in type porocity 0.04- 0.09 micron) including micron cartridge filter in SS 304, Pneumatic Valve, PLC Electrical Panel, flow meter, compressor and all other accessories making the system complete		-				
		Flow rate : 10.0 cum/hr		-				
		Inlet TSS :- 20 mg/lit		-				
		Make : Norit, Toray, Koch, Dow		-				
		Membrane Type :- Pressure Feed Mambrane having life of atleast 4 years or 10 lac ppm hrs when compared with chlorine tolerance capacity in working hour with respect to PPM of chlorine dosing. Out to in process		-				
		No. of UF Membrane - As per Manufacturer		-				
				-				
iii.		UF Feed Pump		-				

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1	2	3	4	5	6	7	8	9
		Capacity : 15.0 m3/hr each (1W + 1S)		-				
		Head : 35 Mts (or as per manufacturer)		-				
		RPM : 2900		-				
		Motor Efficiency Class - IE2		-				
				-				
iv.		Supply, installation, testing & commissioning of UF pre fine filtration. It can be micron filter or Bag filter or as per vendor design. The MOC of housing of filter shall be SS 304		-				
				-				
v.		Supplying, installing, testing, commissioning of centrifugal Vertical UF Backwash pumps with Complete SS - 304 with motor, pressure gauge with isolation cock, Isolation valve, NRV on delivery line. Isolation valve, strainer at suction. The pump shall be suitable for 415±10% volts 3 phase AC supply.		-				
				-				
		Capacity : - 20.0 m3/hr		-				
		Head : - 35 m (or as per manufacturer)		-				
		No. of Pumps: 1 No.		-				
		Note-CIP pumps can be common with item no.c		-				
		Motor Efficiency Class - IE2		-				
				-				
vi.		Supplying, Installation, testing and commissioning of chlorine dosing system comprising of Sintex Tank with inlet/ outlet connection, piping and valves alongwith metering pump of 0-25 LPH for dosing.		-				
				-				
vii.		lit		-				
				-				
viii.		Supplying, Installation, testing and commissioning of CEB Dosing system comprising of Sintex Tank with inlet/ outlet connection, piping and valves alongwith metering pump of 0-12LPH for dosing.		-				
				-				
ix.		Supply installation commissioning of PLC control panel with all automation required like Pneumatic valves, piping in UPVC PLC and other required accessories.		-				
				-				
x.		Supply, installation & commissioning of HDPE backwash tank of 500 Litre capacity including required level controller		-				
				-				
r)		Providing, fixing and testing of packaged type skid mounted hydropneumatic with VFD on every pump, system type comprising of :-		-				

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		(i) Design, engineer, procure, supply, test and commission a pre-engineered, factory fabricated, assembled & tested, fully integrated, highly efficient pump, IE2 motors, skid mounted, complete ready-to-connect packaged pressure booster station, complete with vertical multi stage centrifugal pumps connected in parallel, high efficiency IE2 motors, intelligent multi-pump controller, the controller shall be mounted in a control cabinet with an IP 55 enclosure of suitable rating; SS304 suction and delivery manifolds; isolation ball valves on suction and discharge of each pump; non return valve on discharge side of each pump; hot dip galvanised common base frame; and diaphragm pressure vessel PN10		-				
				-				
		(ii) The pump shall have cast iron head and base, SS304 impeller, SS304 Casing, SS316 Shaft		-				
				-				
		(iii) The motor shall be of efficiency class IE2, insulation class F, enclosure class IP55, capable of operation at 3 phase, 50 Hz, 380-415 V, with built-in thermistor PTC		-				
				-				
		(iv) Pressure vessel of non corrosive SS304 Food Grade. Air cell burst pressure of minimum of 5 times the vessel operating pressure and cycle tested for 2,50,000 cycles with minimum capacity of 100 Litres		-				
				-				
		(v) Control Panel to be of enclosure class IP41, with programmable logic controller (PLC) for cyclic operation of pumps. Pump working sequence should change after every operation. Contractor overload relays and MCBs should conform to IEC 898 – 1995/ specifications. Blinking indications for pumps start, trip, low level trip, health supply should be provided in the panel along with the ammeter & voltmeter. Control panel should also consist of cooling fan.		-				
				-				
		(vi) Pressure tank capacity: (as per manufacturer recommendation) Note: Back up calculation need to be provided for the same. A pre-charged Carbon Steel body diaphragm tank shall be fitted to the discharge pipe with a compatible Butyl-rubber diaphragm. It shall supply water a very low flows to minimize frequent pump start and stop and water hammering. There shall be complete separation between water and air and there should be no contact between water and tank compounds to avoid corrosion. Bladders shall be suitable for sufficient elasticity to permit full expansion inside the tank to ensure better performance and longer working life.		-				
				-				
		(vii) Pressure switches bellow type fitted with micro switch and having maximum pressure and differential scale should confirming BS-6134 standards and IP55 protection class.		-				
				-				
		(viii) Ball valves to be used should be Hot Pressed brass OT-58 with stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be used should be with Springs and O-Ring arrangement.		-				
				-				

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1	2	3	4	5	6	7	8	9
		Pressure Transmitter (0-10/16/25bar, based on system design pressure)		-				
		Pressurge Gauge - 0-16bar		-				
		Suction & Delivery Manifolds - SS304		-				
		One non-return valve and isolating valves for each pump is provided in delivery side and one isolating valve is provided in suction side.		-				
				-				
		Complete set system to be mounted on a common base frame and shall follow following duty.		-				
				-				
i.		Flushing water Hydropneumatic pumps		-				
		System Peak Flow : 600 LPM		-				
		Head : 85 M		-				
		no. of pumps: 2(1w+1s)		-				
		flow per pump : 600 LPM		-				
		Bladder Vessel : 200 lit		-				
		Skid Assembly with butterfly valves to isolate each pump,NRV for each pump, suction and discharge manifold in GI.Y strainer at suction of pump set with butterfly valve.		-				
		Starter VFD (IP 55 rated) for each pump with Microprocessor panel with wiring upto pumps and VFDs with Control Panel mounted on skid		-				
				-				
s)		Providing and fixing vertical in line SS centrifugal pumps with CI volute and SS impellar and with stainless steel shaft, mechanical seal and chrome steel shaft sleeve, connected to a TEFC induction motor suitable for 400/440 volts,1500 RPM, 3 phase 50 cycles A.C. supply having IP 55 protection enclosure. complete with base frame, vibration eliminating pads, nuts and bolts, pressure gauge on delivery side etc. with suction strainer (Necessary RCC foundations as per requirement and as per instructions shall be provided by the agency)		-				
i.		Irrigation Pump in STP		-				
		Capacity : 600 lpm (Each)		-				
		Head : 45 m		-				
		Power : 10.0 HP		-				
		with 100% standby pumps(1W+1S) 2 Nos.		-				
ii.		Providing and fixing C.I. "Y" Type suction strainer with stainless steel perforated sheet screen,flangfd ends iner installed outside water tanks. (Make: Leader / Zoloto / Kartar or equivalent)		-				
		50/80 mm dia (min.) or required size and required number(1 Set)		-				
				-				
iii.		Providing and fixing gun metal or bronze ball valves/butterfly valve/NRV/Rotameter, tested to 15.00 Kg / cm2, screwed end connections complete . (Make: Leader/ Zoloto or equivalent)		-				
		80/50 mm NB (min.) or required size and number(1 Set)		-				
				-				

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iv.		Providing and fixing heavy duty floating flange EPDM rubber expansion bellows with unit control (tie rod & gusset plate) as per manufacturers specifications of standard length complete with all accessories and a working pressure not less than 16 Kg./sqcm including rubber gaskets, flanges, nuts, bolts & washers complete as required.		-				
		80/50 mm NB (min.) or required size and 2 numbers(1 on suction and 1 on delivery)		-				
				-				
t)		1# RCC Treated water tank of minimum 150 cu.m capacity with min. free board 500 mm(1 unit)		-				
u)		1# RCC UF Permeate tank of minimum 150 cu.m capacity with min. free board 500 mm(1 unit)		-				
v)		Providing and fixing Hydropneumatic filter press of 24 plates 1000 x 1000mm size, with suitable sludge pump(screw type) along with piping, fittings valve etc. complete in all respects.		-				
i.		Filter press & sludge pump(screw type) with SS Shaft and Rotor - 3 m3/Hr, 40 m Head - Electrical & mechanical Works , excluding civil works(Set-I)		-				
				-				
w)		Providing and fixing dust and vermine proof cubical type motor control panel center for the various pumps, blower etc. required. It is fabricated from 2mm thick CRCA sheet with stove enamelled finish and comprising of: Panel should have at least 20% spare feeders.		-				
i.		One incoming main of 200 A MCCB or of required		-				
ii.		MCCB/MPCB, one for each motor		-				
iii.		Fully automatic DOL/star delta starters suitable for different motors/pumps/exhaust fans used in the ETP. Upto 7.5 HP DOL may be used and above star/delta starter used with push buttons one for each motor and on/off indicating neon lamps.		-				
iv.		Single phasing preventers of appropriate rating for each motor.		-				
v.		rotary type selector switch		-				
vi.		Panel type ampere meters, one for each motor shall be with rotary selector switch to monitor line currents.		-				
vii.		Panel type volt meters, on incoming main with rotary selecting switch to monitor voltage between phase to neutral and phase to phase.		-				
viii.		Neon phase indicating lamps and indicating lamp for each motor on incoming mains.		-				
ix.		Rotary switch for manual or auto operation for each pump		-				
x.		Fully taped separate aluminum bus bar of required capacity for normal and emergency supply.		-				
xi.		The panel shall be pre-wired with coded wiring. All intercnnting wiring from incoming main to switchgear, meters and accessories within the switchboard panel shall have suitable copper ferrules (Complete 1 set)		-				
				-				

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Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
	x)	Electrical works(including supply, installation and termination of cables of suitable size as per HP of all pumps with all structural supports, clamps and cable trays as per approved design/specifications, installation will be as per relevant Indian standard and CPWD specification along with control cable of suitable size).(1 lot). Axial exhaust Fan GI Sheet ducting for desire ventilation of Pump Room area as per approved Drawings. Any other electrical and mechanical item required to complete the work.(Set-1)		-				
	y)	Providing and fixing digital type flow meter and energy meter etc. complete in all respects. (Set-1) & Providing and fixing lab. Equipments including digital type pH meter, COD kit, TDS kit, bicker, conical flask etc. complete in all respects. (Set-1)		-				
	z)	Rooms for Pumps & control panel (100 sq.m.) (minimum size) - Electrical & mechanical Works , Ventilation fan & ducts with minimum air change 20 CFM and lighting etc.,excluding civil works.(Set-1)		-				
		Note: The cost of chemical & manpower for trial run for period of two month from the date of handing over obtaining approval from Local Pollution Department including the cost of consumables complete as specification as directed .Obtain required no. of test report of treated/raw sewer during trial run. No additional payment shall be made on this account.		-				
		Complete STP work as mentioned above		-				
				-				
		SUB TOTAL(Sewage Treatment Plant)-[Total of Sub Head STP(a) to (z)]	SET	1			90,00,000.00	90,00,000.00
				-				-
14.02	NS	Operation and maintenance Cost (STP & ETP)		-				-
	NS	Testing charges of Raw and treated effluent for all the required parameter from approved lab (after defect and liability period)-1 set of test in every 3 months	Each	4			10,000.00	40,000.00
				-				-
	NS	Providing chemical and consumables for satisfactory operation of STP etc. completed in all respect in all respect excluding cost of electricity and manpower and spare parts during defect liability period i.e. 1 year and also including the cost for providing the on plant training to the respective personnel's for operation and maintenance of STP.	Year	1			2,00,000.00	2,00,000.00
				-				-
		Providing (operator & one Helper) i.e. manpower to operate the STP in each shift. In case the additional manpower required for proper operation, the same will be considered as part of this item only.		-				-
	NS	Helper - 3 no./day(i.e one in each shift)	Months	12			60,000.00	7,20,000.00
	NS	technical operator - 2 no./day	Months	12			50,000.00	6,00,000.00
	NS	Supervisor (1 No. Per day)	Months	12			40,000.00	4,80,000.00
	NS	AMC of all equipment's, components and spares of STP after one year defect liability period. The consumables will be reimbursed by owner as per actual cost.	Year	1			4,00,000.00	4,00,000.00
		Subtotal (O & M)		-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		Grand total STP (Including O&M)		-			-	114,40,000.00
15	NS	Water Supply Pump(PANEL)-Housing		-				
1	NS	Water Supply Pump- Housing		-				
		Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, powder coated, 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 technical specification & as required.		-				
		Note :		-				
		All MCCBs shall have Ics=Icu =100%		-				
				-				
15.01		INCOMER :		-				
		250 Amp 415 volts, 35 KA (Ics=Icu), FP MCCB microprocessor based, with O/L, S/C & inbuilt E/F protection release.		-				
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB		-				
		"ON" ,"OFF" and "TRIP" LED indicating lamp and 6A control SP MCBs		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		1 no. Digital voltmeter with selector switch		-				
		1 no Digital ammeter with selector switch with one set of suitable C.T. s		-				
				-				
		BUSBARS :		-				
		300 Amp TPN busbars of aluminium		-				
				-				
		OUTGOINGS :		-				
i		2 Sets of following		-				
		63 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		1 NOs. 3 Phase,star-delta starter of 25 HP with thermal overload relay with inbuilt/separate single phase preventer , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
ii		2 Sets of following		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		1 no 3 Phase,DOL starter of 7.5HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
ii		6 Sets of following		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		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 of 2HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
				-				
iv		6 Sets of following		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		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 of 3 HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
vi		5 Sets of following (tube well)		-				
		63 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		Digital ammeter with selector switch with one set of suitable CT.s		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP" .		-				
		Digital ammeter with selector switch with one set of suitable CT.s		-				
				-				
vii		2 Sets of following (Spare)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP" .		-				
		Water supply PUMP PANEL in pump room as above	Set	1			417211	4,17,211.00
				-				-
15.02		Starter for Tubewell		-				-

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		1 nos . 3 Phase, fully automatic star Delta starter of 15HP with thermal overload relay with inbuilt/separate single phase preventer , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.	each	5			20293	1,01,465.00
				-				
		Subtotal (Water Supply Panel)-Housing		-				5,18,676.00
		Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, powder coated, 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 technical specification & as required.		-				
		Note :		-				
		All MCCBs shall have Ics=Icu =100%		-				
1.01		INCOMER :		-				
		250 Amp 415 volts, 35 KA (Ics=Icu), FP MCCB microprocessor based, with O/L, S/C & inbuilt E/F protection release.		-				
		R,Y&B phase indicating lamp (LED type) with 6A control SP MCB		-				
		"ON" ,"OFF" and "TRIP" LED indicating lamp and 6A control SP MCBs		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		1 no. Digital voltmeter with selector switch		-				
		1 no Digital ammeter with selector switch with one set of suitable C.T. s		-				
				-				
		BUSBARS :		-				
		300 Amp TPN busbars of aluminium		-				
				-				
		OUTGOINGS :		-				
i		2 Sets of following (Raw water transfer pump)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		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 of 5HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
ii		2 Sets of following (Filter feed pump for WTP)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
		1 no 3 Phase,DOL starter of 4HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
iii		2 Sets of following (Soft water transfer pump)		-				
		63 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		1 NOs. 3 Phase,star-delta starter of 12.5 HP with thermal overload relay with inbuilt/separate single phase preventor , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
iv		4 Sets of following (hydropneumatic pump for pump)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		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 of 9 HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
		Digital ammeter with selector switch with one set of suitable cast resin C.T' s		-				
				-				
v		4 Sets of following (Drainage pump & Sewerage Pump)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		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 of 2 HP with thermal overload relay with inbuilt single phase preventor , contactor, Push Buttons and Switches etc complete as required.		-				
		Digital ammeter with selector switch with one set of suitable CT,s.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP".		-				
				-				
vi		2 Sets of following (tube well)		-				
		63 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		Digital ammeter with selector switch with one set of suitable CT,s.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP" .		-				
		Digital ammeter with selector switch with one set of suitable CT,s.		-				

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Total QTY. OPD & HOUSING	DSR 16 Rate (Rs)	DSR Amount (Resid.+OPD)	Market Rate	Market Amount Kalyani(Resid.+OPD)
1	2	3	4	5	6	7	8	9
				-				
vii		2 Sets of following (Spare)		-				
		32 Amp. 415 volts, 35 KA (Ics=Icu), TPN MCCB, with Thermal magnetic release having variable current settings. .		-				
		Extended rotary operating mechanism with door interlock with defeat feature and padlock facility. MCCB should have spreader links & phase barriers.		-				
		LED indicating Lamps for "ON" , "OFF" & "TRIP" .		-				
		Water supply PUMP PANEL in pump room as above	Set	1			417211.0506	4,17,211.05
				-				-
1.02		Starter for Tubewell		-				-
		1 nos . 3 Phase, fully automatic star Delta starter of 15HP with thermal overload relay with inbuilt/separate single phase preventer , contactor, Timer, Push Buttons and Auto-manual selector switch etc including its mounting on the wall and control cables for starting of the motor complete as required.	each	2			20293.11701	40,586.23
				-				
		Subtotal water supply panel (OPD)						4,57,797.28

ABSTRACT

Name of Work : Construction of Residential Complex & OPD Block at AIIMS, Kalyani

S.No.	DESCRIPTION	DSR Amount (Rs) (Resid.)	Market Amount(Rs) (Resid.)
A	INTERNAL PLUMBING		
1	SANITARY FIXTURES	195,10,441.40	161,99,109.90
2	SOIL, WASTE AND VENT PIPES	382,70,219.45	254,93,102.44
3	WATER SUPPLY	239,83,274.15	295,90,706.00
4	SEWERAGE AND DRAINAGE(Around Building)	58,68,712.30	6,69,600.00
5	SOLAR WATER HEATING SYSTEM & RECIRCULATING	10,59,038.20	162,90,074.00
6	RAIN WATER PIPING	50,00,026.00	41,66,460.66
B	EXTERNAL PLUMBING		
7	EXTERNAL WATER SUPPLY	170,58,952.48	128,25,949.00
8	BOREWELL	19,14,479.00	11,20,000.00
9	RAIN WATER HARVESTING	7,56,761.00	24,72,636.00
10	EXTERNAL SEWERAGE AND DRAINAGE(except Around Building)	371,15,595.35	7,97,800.00
11	EARTH WORK(Plumbing work)	51,22,923.30	
12	WATER TREATMENT PLANT		171,62,970.00
13	EFFLUENT TREATMENT PLANT(ETP) -OPD		30,00,000.00
14	SEWAGE TREATMENT PLANT(including O&M)		114,40,000.00
15	WATER SUPPLY ELECTRICAL PANEL-Housing		5,18,676.00
16	WATER SUPPLY ELECTRICAL PANEL-OPD		4,57,797.28
	TOTAL	1556,60,422.63	1422,04,881.28
	GRAND TOTAL (RS)	2978,65,303.90	

BOQ OF ELECTRICAL WORKS FOR CONSTRUCTION OF RESIDENTIAL COMPLEX & OPD BLOCK, AIIMS- KALYANI

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
				Total for all blocks				
1		SUBHEAD 1 - SUBSTATION (HT PANELS, TRANSFORMERS & PSS)						
		Main HT PANEL BOARD OPD						
1.1.1	NSR	11KV CONSUMER HT PANEL complete with following	Set	1	-	-	59,98,787	5998787
		Supplying, installation, testing & commissioning of Indoor type floor mounted metal clad, 11KV VCB panel with 15 Nos.VCBs (4 No -Incomer, 1 No buscoupler & 10 No Outgoings) totally enclosed & fully interlocked, horizontal draw out, horizontal isolation type breaker as per IS 13118, as amended up to date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, manually charged and manually closing breaker suitable for use on 11 KV, 3 phase, 50Hz AC supply with short circuit fault level of 500 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 8 NO + 8 NC and equipped with following switch gears and Accessories i/c connections with suitable for 2# 3C 400 sq.mm XLPE 11 KV cable for Incomer & 1# 3C 400 sq.mm XLPE 11 KV cable for outgoings (cable entry from bottom), with cable end termination with heat shrinkable jointing material. All wiring for the above including interconnections with minimum 1.5 sqmm copper FRLS wires, complete as per specifications and Data Sheets NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition						
		A) Incoming 1 & 2- 1250 Amps TP VCB- 2 Nos. with the Following						
		a) 11 KV/ 110 Volts PT class 0.5 accuracy and not less than 100 VA Burden with 1 no Voltmeter 12 KV Digital type with Selector switch for voltmeter and protection fuses for metering upto 12 KV on Incomer-1No.						
		b) 0-1000 Amps digital type Ammeter with Selector switch -1 No.						
		c) Microprocessor based numerical relay with O/L,E/F, S/C, Overvoltage & Undervoltage Protection- 1 No.						
		d) 3 CTS 1000/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.						
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set						
		f) Phase Indicating lamps with HRC fuses-1 Set each						
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY- 1 Set						
		h) Annunciator - 1 No.						
		i) Push buttons for close and trip- 1 Set						
		j) Space Heater- 1 Set each						
		k) Electrical & Mechanical Interlock and Autochangeover between two incomers complete with all wiring, sensing elements & accessories						
		l) Electrical & Mechanical Interlock between incomers & buscoupler complete with all wiring, sensing elements & accessories						
		m) Three pin socket with switch						
		B) Incoming 3 & 4 - 1250 Amps TP VCB- 2 Nos. with the Following						
		a) 11 KV/ 110 Volts PT class 0.5 accuracy and not less than 100 VA Burden with 1 no Voltmeter 12 KV Digital type with Selector switch for voltmeter and protection fuses for metering upto 12 KV on Incomer-1No.						
		b) 0-1000 Amps digital type Ammeter with Selector switch -1 No.						
		c) Microprocessor based numerical relay with O/L,E/F, S/C, Overvoltage & Undervoltage Protection- 1 No.						
		d) 3 CTS 1000/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.						
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set						
		f) Phase Indicating lamps with HRC fuses-1 Set						
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY- 1 Set						
		h) Annunciator - 1 No.						
		i) Push buttons for close and trip- 1 Set						
		j) Space Heater- 1 Set						
		k) Electrical & Mechanical Interlock and Autochangeover between two incomers complete with all wiring, sensing elements & accessories						
		l) Electrical & Mechanical Interlock between incomers & buscoupler complete with all wiring, sensing elements & accessories						
		m) Three pin socket with switch						
		C) Bus Coupler - 1250 Amps VCB- 1 Nos. with the Following						
		a) Phase Indicating lamps with HRC fuses-1 Sets.						
		b) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY- 1 Set.						
		c) Push buttons for close and trip- 1 Set						
		d) Space Heater- 1 Set						
		D) Outgoing - 630 Amps VCB- 4 Nos. with the Following						
		b) 0-200 Amps digital type Ammeter with Selector switch -1 No.						
		c) Microprocessor based numerical relay with O/L,E/F, S/C Protection-1No.						
		d) 3 CTS 150/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set		-		-		
		e) Phase Indicating lamps with HRC fuses-1 Sets.		-		-		
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY-1 Set.		-		-		
		g) Annunciator - 1 No.		-		-		
		h) Push buttons for close and trip- 1 Set		-		-		
		i) Space Heater- 1 Set		-		-		
		E) Outgoing - 630 Amps VCB- 6 Nos. with the Following		-		-		
		b) 0-500 Amps digital type Ammeter with Selector switch -1 No.		-		-		
		b) Microprocessor based numerical relay with O/L,E/F, S/C Protection- 1No.		-		-		
		d) 3 CTS 300/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.		-		-		
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set		-		-		
		e) Phase Indicating lamps with HRC fuses-1 Sets.		-		-		
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY-1 Set.		-		-		
		g) Annunciator - 1 No.		-		-		
		h) Push buttons for close and trip- 1 Set		-		-		
		i) Space Heater- 1 Set		-		-		
1.1.1.1	NSR	Supply, Installation, Testing & commissioning of Constant Voltage Constant Current Battery Charger with float & boost charging, 150AH, 110V DC output, with potential free contact with maintenance free batteries (30 min backup in fully charged condition) complete with all Accessories like insulators, clamps, bimetal connectors, M.S.support rack etc as per specifications & data sheets	Set	1		-		
1.1.2	NSR	11KV DG HT & SYNCH PANEL. complete with following	Set	1		-	30,84,927	3084927
		Supplying, installation, testing & commissioning of Indoor type floor mounted metal clad, 11KV VCB panel (extendable in future) with 5 Nos. VCBs (3 No -Incomer, 1 No buscoupler & 2 No Outgoings) totally enclosed & fully interlocked, horizontal draw out, horizontal isolation type breaker as per IS 13118, as amended up to date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, manually charged and manually closing breaker suitable for use on 11 KV, 3 phase, 50Hz AC supply with short circuit fault level of 500 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 8 NO + 8 NC and equipped with following switch gears and Accessories i/c connections with suitable for 1# 3C 300 sq.mm XLPE 11 KV cable for Incomer & 2# 3C 400 sq.mm XLPE 11 KV cable for outgoing (cable entry from bottom), with cable end termination with heat shrinkable jointing material. All wiring for the above including interconnections with minimum 1.5 sqmm copper FRLS wires, complete as per specifications and Data Sheets NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacturer recommendations & complete in ready to use condition						
		A) Incoming 1,2 & 3- 630 Amps TP VCB- 3 Nos. with the Following		-		-		
		a) 11 KV/ 110 Volts PT class 0.5 accuracy and not less than 100 VA Burden with 1 no Voltmeter 12 KV Digital type with Selector switch for voltmeter and protection fuses for metering upto 12 KV on Incomer-1No.		-		-		
		b) 0-200 Amps digital type Ammeter with Selector switch -1 No		-		-		
		c) Microprocessor based numerical relay with O/L,E/F, S/C, Overvoltage & Undervoltage Protection- 1 No.		-		-		
		d) 3 CTS 150/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.		-		-		
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set		-		-		
		f) Phase Indicating lamps with HRC fuses-1 Set		-		-		
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY-1 Set		-		-		
		h) Annunciator - 1 No.		-		-		
		i) Push buttons for close and trip- 1 Set		-		-		
		j) Space Heater- 1 Set		-		-		
		k) Electrical & Mechanical Interlock between incomers & buscoupler complete with all wiring, sensing elements & accessories		-		-		
		l) Three pin socket with switch		-		-		
		C) Bus Coupler - 1250 Amps VCB- 1 Nos. with the Following		-		-		
		a) Phase Indicating lamps with HRC fuses-1 Sets.		-		-		
		b) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY-1 Set.		-		-		
		c) Push buttons for close and trip- 1 Set		-		-		
		d) Space Heater- 1 Set		-		-		
		D) Outgoing - 1250 Amps VCB- 2 Nos. with the Following		-		-		
		b) 0-1000 Amps digital type Ammeter with Selector switch -1 No.		-		-		
		b) Microprocessor based numerical relay with O/L,E/F, S/C Protection- 1No.		-		-		
		d) 3 CTS 1000/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.		-		-		
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set		-		-		
		e) Phase Indicating lamps with HRC fuses-1 Sets.		-		-		
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY-1 Set.		-		-		
		g) Annunciator - 1 No.		-		-		
		h) Push buttons for close and trip- 1 Set		-		-		
		i) Space Heater- 1 Set		-		-		
		E) Micro PLC for load on & DG status with Ethernet Output- 1set		-		-		
		a) 1 Ethernet to 4 OFC Converter - 1 Set		-		-		
		b) Power Supply for Micro PLC - 1 No		-		-		
1.1.3	NSR	NIC & NGR Panel complete with following	Set	1		-	5,55,765	555765
		Supply, installation, Testing & Commissioning of NIC & NGR panel with following and including connectivity between DG set & NGR as well as between NGR and ground complete as required as per following:						
		Neutral Isolating Switch for 1 No. DG sets:						
		Each comprising of following :						
		1 No. 200 amps single Pole 11 KV vacuum contactor for neutral isolation						
		One set of Aluminium bus bars						
		On/Off indicating lamps including all accessories						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		Auto / Manual Selector Switch		-		-		
		EARTH FAULT RELAY (51N)		-		-		
		Cast Resin CT with double wound. 150/5 with protection core.		-		-		
		7.5VA burden for protection (Class 5P-20) - 1 set		-		-		
		NGR PANEL :		-		-		
		Each comprising of the following :		-		-		
		The register element shall be made of un breakable corrosion proof. Punched stainless steel grid of Ferro chrome aluminum alloy. The resistor shall be suitable for the full load current on 10 sec. with temperature rise not carrying exceeding 375 deg C over ambient temperature. The resistance element shall be supported on suitable insulating base housed in 2 mm thick sheet steel self supporting, free standing cubical with louvers on sides. The unit shall be complete with connection, terminals glands plates etc.		-		-		
1.1.4	NSR	Supply, installation, Testing & commissioning of Control and Relay panel (indoor type) complete with following	Set	1		-	13,61,026	1361026
		1 No. 2250 KVA 11 KV DG sets incoming each comprises the following :		-		-		
		PLC/Microprocessor based synchronizing relay with all components & accessories required for three 2250 KVA DG Sets synchronization.		-		-		
		Breaker Control Switch		-		-		
		Excitation Ammeter		-		-		
		Excitation voltmeter		-		-		
		Temperature scanner		-		-		
		Multifunction meter with RS-485 ports.		-		-		
		Multi function numeric relay with Mod bus RS-485 ports for the following:		-		-		
		a) Voltage restrained over current protection (50/50N/51 /51N).		-		-		
		b) Machine Thermal Relay (49)		-		-		
		c) Current unbalance (46)		-		-		
		d) Loss of excitation (40)		-		-		
		e) Reverse Power (32)		-		-		
		f) Under Power (37)		-		-		
		g) Under / Over frequency (81)		-		-		
		h) Breaker failure protection (52BF)		-		-		
		i) Volts/Hz (24)		-		-		
		j) Under / Over voltage (27 / 59)		-		-		
		Master trip relay (86)		-		-		
		Trip circuit supervision relay (95)		-		-		
		Engine cranking relay		-		-		
		Emergency Push Button.		-		-		
		Numerical relay for generator protection with dual adjustable slop (87G)		-		-		
		Numeric restricted earth fault (64 R)		-		-		
		Audio visual annunciation windows with accept, reset & test, push buttons.		-		-		
		a) High water temperature		-		-		
		b) Low lube pressure		-		-		
		c) Engine over speed		-		-		
		d) Over/under voltage		-		-		
		e) Over load / Earth fault		-		-		
		f) Differential		-		-		
		g) Reverse power		-		-		
		h) Under/over frequency		-		-		
		i) Winding temperature high		-		-		
		j) Bearing temperature high		-		-		
		k) Over Current		-		-		
		l) Earth Fault		-		-		
		m) 4 no. spares		-		-		
		Microprocessorbased DG controller and HMI (Human Machine Interference) shall also be part of relay panel.		-		-		
		PLC panels		-		-		
		Components for PLC Panels comprises following		-		-		
		a) Main Processor 1 No.		-		-		
		b) 32 Channel digital I/P Module 10 No.		-		-		
		c) 32 Channel digital O/P Module 10 No.		-		-		
		d) 16 Slot I/o Rack 2 No.		-		-		
		e)Rack Power Supply 2 No.		-		-		
		f) 4 Channel Analog I/P Module 1 No.		-		-		
		g) EEPROM 1 No.		-		-		
		h) Power Monitor 12 No.		-		-		
		i) Advance Interface Convertor 1 No.		-		-		
		j) Communication Cable 1 No.		-		-		
		k) Communication Card 1 No.		-		-		
		l) Window base graphics software 1 No.		-		-		
		m) 1 Set mimic		-		-		
		n) 1 set Aux. Relays		-		-		
		o) 1 Set indicating lights / PB		-		-		
		p) 1 set control MCB's		-		-		
		q) 1 No. Auto/Manual/Test Switch		-		-		
		r) 1No. status indicator		-		-		
1.1.5	NSR	Supply, Installation, Testing & commissioning of Constant Voltage Constant Current Battery Charger with float & boost charging, 150AH, 110V DC output, with potential free contact with maintenance free batteries (30 min backup in fully charger condition) complete with all Accessories like insulators, clamps, bimetal connectors, M.S.support rack etc as per specifications & data sheets	Set	1		-	1,00,850	100850
1.1.1	NSR	OPD 11KV HT PANEL complete with following	Set	1		-	2100000	2100000

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		Supplying, installation, testing & commissioning of Indoor type floor mounted metal clad, 11KV VCB panel with 6 Nos.VCBs (2 No -Incomer, 1 No buscoupler & 3 No Outgoings) totally enclosed & fully interlocked, horizontal draw out, horizontal isolation type breaker as per IS 13118, as amended up to date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, manually charged and manually closing breaker suitable for use on 11 KV, 3 phase, 50Hz AC supply with short circuit fault level of 500 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 8 NO + 8 NC and equipped with following switch gears and Accessories i/c connections with suitable for 1# 3C 400 sq.mm XLPE 11 KV cable for Incomer & 1# 3C 300 sq.mm XLPE 11 KV cable for outgoings (cable entry from bottom), with cable end termination with heat shrinkable jointing material. All wiring for the above including interconnections with minimum 1.5 sqmm copper FRLS wires, complete as per specifications and Data Sheets NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition						
		A) Incoming 1 & 2- 630 Amps TP VCB- 2 Nos. with the Following						
		a) 11 KV/ 110 Volts PT class 0.5 accuracy and not less than 100 VA Burden with 1 no Voltmeter 12 KV Digital type with Selector switch for voltmeter and protection fuses for metering upto 12 KV on Incomer-1No.						
		b) 0-500 Amps digital type Ammeter with Selector switch -1 No.						
		c) Microprocessor based numerical relay with O/L,E/F, S/C, Overvoltage & Undervoltage Protection- 1 No.						
		d) 3 CTS 300/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.						
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set						
		f) Phase Indicating lamps with HRC fuses-1 Set each						
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY- 1 Set						
		h) Annunciator - 1 No.						
		i) Push buttons for close and trip- 1 Set						
		j) Space Heater- 1 Set each						
		k) Electrical & Mechanical Interlock between incomers & buscoupler complete with all wiring, sensing elements & accessories						
		l) Three pin socket with switch						
		B) Bus Coupler - 630 Amps VCB- 1 Nos. with the Following						
		a) Phase Indicating lamps with HRC fuses-1 Sets.						
		b) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY- 1 Set.						
		c) Push buttons for close and trip- 1 Set						
		d) Space Heater- 1 Set						
		D) Outgoing - 400 Amps VCB- 3 Nos. with the Following						
		b) 0-200 Amps digital type Ammeter with Selector switch -1 No.						
		b) Microprocessor based numerical relay with O/L,E/F, S/C Protection- 1No.						
		d) 3 CTS 150/5 A of 15 VA burden and accuracy class-0.5 for metering and class 5P 20 for protection -1 Set each.						
		e) Master trip relay and trip circuit healthy supervision relay - 1 Set						
		e) Phase Indicating lamps with HRC fuses-1 Sets.						
		g) Indicating lamps to indicate OPEN, CLOSE, TRIP, SPRING CHARGED, TRIP CIRCUIT HEALTHY- 1 Set.						
		g) Annunciator - 1 No.						
		h) Push buttons for close and trip- 1 Set						
		i) Space Heater- 1 Set						
1.1.1.1	NSR	Supply, Installation, Testing & commissioning of Constant Voltage Constant Current Battery Charger with float & boost charging, 100AH, 110V DC output, with potential free contact with maintenance free batteries (30 min backup in fully charger condition) complete with all Accessories like insulators, clamps, bimetal connectors, M.S.support rack etc as per specifications & data sheets	Set	1			included above	
1.1.2	NSR	NIC & NGR Panel complete with following Supply, installation, Testing & Commissioning of NIC & NGR panel with following and including connectivity between DG set & NGR as well as between NGR and ground complete as required as per following: Neutral Isolating Switch for 1 No. DG sets: Each comprising of following : 1 No. 200 amps single Pole 11 KV vacuum contactor for neutral isolation One set of Alluminium bus bars On/Off indicating lamps including all accessories Auto / Manual Selector Switch EARTH FAULT RELAY (51N) Cast Resin CT with double wound, 150/5 with protection core. 7.5VA burden for protection (Class 5P-20) - 1 set NGR PANEL : Each comprising of the following : The register element shall be made of un breakable corrosion proof. Punched stainless steel grid of Ferro chrome aluminum alloy. The resistor shall be suitable for the full load current on 10 sec. with temperature rise not carrying exceeding 375 deg C over ambient temperature. The resistance element shall be supported on suitable insulating base housed in 2 mm thick sheet steel self supporting, free standing cubical with louvers on sides. The unit shall be complete with connection, terminals glands plates etc.	Set	2			5,55,765	1111530
1.1.3	NSR	Supply, installation, Testing & commissioning of Control and Relay panel (indoor type) complete with following 1 No. 2250 KVA 11 KV DG sets incoming each comprises the following : PLC/Microprocessor based synchronizing relay with all components & accessories required for three 2250 KVA DG Sets synchronization. Breaker Control Switch Excitation Ammeter Excitation voltmeter Temperature scanner Multifunction meter with RS-485 ports. Multi function numeric relay with Mod bus RS-485 ports for the following: a) Voltage restrained over current protection (50/50N/51 /51N).	Set	2			1361026	2722052

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
				Total for all blocks				
		b) Machine Thermal Relay (49)		-		-		
		c) Current unbalance (46)		-		-		
		d) Loss of excitation (40)		-		-		
		e) Reverse Power (32)		-		-		
		f) Under Power (37)		-		-		
		g) Under / Over frequency (81)		-		-		
		h) Breaker failure protection (52BF)		-		-		
		i) Volts/Hz (24)		-		-		
		j) Under / Over voltage (27 / 59)		-		-		
		Master trip relay (86)		-		-		
		Trip circuit supervision relay (95)		-		-		
		Engine cranking relay		-		-		
		Emergency Push Button.		-		-		
		Numerical relay for generator protection with dual adjustable slop (87G)		-		-		
		Numeric restricted earth fault (64 R)		-		-		
		Audio visual annunciation windows with accept, reset & test, push buttons.		-		-		
		a) High water temperature		-		-		
		b) Low lube pressure		-		-		
		c) Engine over speed		-		-		
		d) Over/under voltage		-		-		
		e) Over load / Earth fault		-		-		
		f) Differential		-		-		
		g) Reverse power		-		-		
		h) Under/over frequency		-		-		
		i) Winding temperature high		-		-		
		j) Bearing temperature high		-		-		
		k) Over Current		-		-		
		l) Earth Fault		-		-		
		m) 4 no. spares		-		-		
		Microprocessor based DG controller and HMI (Human Machine Interference) shall also be part of relay panel.		-		-		
		PLC panels		-		-		
		Components for PLC Panels comprises following		-		-		
		a) Main Processor 1 No.		-		-		
		b) 32 Channel digital I/P Module 10 No.		-		-		
		c) 32 Channel digital O/P Module 10 No.		-		-		
		d) 16 Slot I/O Rack 2 No.		-		-		
		e) Rack Power Supply 2 No.		-		-		
		f) 4 Channel Analog I/P Module 1 No.		-		-		
		g) EEPROM 1 No.		-		-		
		h) Power Monitor 12 No.		-		-		
		i) Advance Interface Convertor 1 No.		-		-		
		j) Communication Cable 1 No.		-		-		
		k) Communication Card 1 No.		-		-		
		l) Window base graphics software 1 No.		-		-		
		m) 1 Set mimic		-		-		
		n) 1 set Aux. Relays		-		-		
		o) 1 Set indicating lights / PB		-		-		
		p) 1 set control MCB's		-		-		
		q) 1 No. Auto/Manual/Test Switch		-		-		
		r) 1No. status indicator		-		-		
1.2		TRANSFORMERS						
1.2.1	NSR	Design, Manufacturing, supply, installation, testing and commissioning of Outdoor, ONAN type, 2000 KVA 11KV/433V, 3 Phase, 50 Hz, copper Double wound transformer with winding temperature indicator/ controller actuated by means of resistance temperature detector embedded in LV windings, On load tap changer with indoor type RTCC panel, with approximately 6.25% impedance, tappings for on load operation on HV side in steps of + 5% / - 15% in steps of 1.25 %, on suitable plinth. Having cable end boxes on HV side suitable for 3 x 300 sq.mm XLPE cable of 11KV grade and on LV side suitable for 3200A 3Ph Busduct (IP65) with neutral brought out separately, including supplying and laying of copper conductor multicore control cables from transformer to HT breaker for safety tripping and standard fittings & Accessories like oil level indicator, Dehydrating silicagel breather, Air release device, Drain & Filter valve with blanking plate and separate neutral bushing etc., complete as required and conforming to IS-1180, level-1 losses as per specification & data sheets attached complete in all respects as required at site.	Set	3			3475500	10426500
		NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition						
1.3.0		SUBSTATION (PSS, TRANSFORMERS)						
1.3.1		PACKAGED SUB-STATIONS						
		Design, manufacture, supply, installation, testing and commissioning of following packaged sub-stations:						
	NSR	1250 KVA, 11kv / 415V PACKAGED SUBSTATION: HT SIDE: 3 WAY RING MAIN UNIT (RMU - CVV Type) TRANSFORMER: OIL TYPE LT SIDE: 4P ACB complete with following	Set	4			30,38,331	12153324
		Outdoor type Package Substation with facility for internal lighting, earthing, padlocks etc. Connection between RMU & Transformer will be by 3 nos. 1C x 150 Sqmm. Copper conductor XLPE cable and connections from Transformer to LT ACB will be by Aluminium bus bar connections. Cable termination kits for RMU shall be in the scope of supply (within the enclosure).						
		NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition						
		Package Substation will have the following equipments:						
		A) HT SIDE						
		3 Way Non Extensible Unit with 1 No. Circuit Breakers as Incomer-1 & 1 No. Load break switch as Incomer-2 & 1 No. Circuit Breaker as Outgoing to Transformer						
		3 Way, 11kV, 21KA / 3 Sec, indoor non extensible free standing metal clad SF6 insulated ring main unit type comprising of incoming one number manual operated tee-off SF 6 insulated vacuum circuit breaker and one number manual operated 630A fault making / load breaking switch and outgoing one number manual operated tee-off SF 6 insulated vacuum circuit breaker suitable for 11KV, 3C 300 Sqmm XLPE Al Cable complete with all accessories as listed below:						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		a) IDMT RELAY- Self Powered, Microprocessor based numerical 3 Nos. O/C +1 No. E/F (with inbuilt tripping mechanism - my top or equivalent) with LCD display - ON/OFF/Trip. (Incomer breakers shall have bidirectional protection)		-	-	-	-	-
		b) Dual core CT's for protection & metering, cast resin type and of suitable ratio & burden, (Class-1 for metering & class 5P20 for protection).		-	-	-	-	-
		c) Cast Resin PT's of 11000V/3/110V/√3 ratio of Class-1 accuracy & of suitable burden with HV fuse on primary side & MCB / MPCB on secondary side.		-	-	-	-	-
		d) The Ring Switches and Tee-Off Circuit Breaker are provided with Integrated Earthing Switches with Making Capacity.		-	-	-	-	-
		e) Live cable indicator for ring switches.		-	-	-	-	-
		f) Shunt trip coil rated for 24V DC		-	-	-	-	-
		g) SF6 Gas pressure indicator.		-	-	-	-	-
		h) Padlocking facility.		-	-	-	-	-
		i) Mechanical indications for breaker ON / OFF / TRIP		-	-	-	-	-
		j) BMS multifunction meter (A, V, Hz, KW, KWH, KVA, KVAH, KVAR, KVARH)		-	-	-	-	-
		k) Line Voltage presence indicator.		-	-	-	-	-
		l) Transformer Auxiliary Relay with alarm & trip contacts for Winding temperature, Oil temperature, Buchholz		-	-	-	-	-
		m) Emergency 'OFF' Push buttons		-	-	-	-	-
		n) Manual ON/OFF Push buttons		-	-	-	-	-
		o) 8 Windows annunciator. (Remote location i.e. inside LT Panel room)		-	-	-	-	-
		p) Trip circuit healthy indication		-	-	-	-	-
		q) 230V AC / 24V DC Power Pack of suitable capacity		-	-	-	-	-
		r) CFL based bulk head light fixture with limit switch in the HT Compartment.		-	-	-	-	-
		B) TRANSFORMER		-	-	-	-	-
		11KV/415V, 1250 kVA three phase, Dyn11, tapping + 5% to - 5% in steps of 2.5% off load Tap changer, CU/CU Winding Hermetically Sealed ONAN Transformer with standard accessories :1 No.		-	-	-	-	-
		(Transformer shall be minimum acceptable losses at 50% & 100% load as defined in IS-1180 level-1 losses.)		-	-	-	-	-
		Door interlock to trip HT breaker on opening of transformer compartment door (only in transformer's with off circuit tap changer).		-	-	-	-	-
		C) LT SIDE		-	-	-	-	-
		1 No. 4 pole 2000 A 50kA manually operated fixed type ACB with microprocessor based O/L, S/C & E/F releases. Ics = Icu =Icw 100% for the breakers with suitable flange & busbar for Busduct (IP65) connection		-	-	-	-	-
		CFL based bulk head light fixture with limit switch in the LT Compartment.		-	-	-	-	-
		Note: LT side metering shall include: 1set of LT cast resin CT's, PT's & BMS multifunction meter (A,V, Hz, PF, KW, KWH, KVA, KVAH, KVAR), LED TYPE R Y B indication lamps, ON/OFF/ Trip indication lamps, control MCB's / MPCB's of required fault withstand and control wiring etc. at the LT side incomer breaker.		-	-	-	-	-
1.3.1	NSR	Supply, Installation, Testing & commissioning of Constant Voltage Constant Current Battery Charger with float & boost charging, 100AH, 24V DC output, with potential free contact with maintainance free batteries (30 min backup in fully charger condition) complete with all Accessories like insulators, clamps, bimetal connectors, M.S.support rack etc as per specifications & with DC DB having 6nos 10Amps MCB's.	Set	4	-	-	-	-
				-	-	-	-	-
1.3.2		PACKAGED SUB-STATIONS		-	-	-	-	-
		Design, manufacture, supply, installation, testing and commissioning of following packaged sub-stations:		-	-	-	-	-
				-	-	-	-	-
1.3.2.1	NSR	750 KVA, 11kV / 415V PACKAGED SUBSTATION: HT SIDE: 3 WAY RING MAIN UNIT (RMU - CVV Type) TRANSFORMER: OIL TYPE LT SIDE: 4P ACB complete with following	Set	2	-	-	25,00,000	500000
		Outdoor type Package Substation with facility for internal lighting, earthing, padlocks etc. Connection between RMU & Transformer will be by 3 nos. 1C x 150 Sqmm. Copper conductor XLPE cable and connections from Transformer to LT ACB will be by Aluminium bus bar connections. Cable termination kits for RMU shall be in the scope of supply (within the enclosure).		-	-	-	-	-
		NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition		-	-	-	-	-
		Package Substation will have the following equipments:		-	-	-	-	-
		A) HT SIDE		-	-	-	-	-
		3 Way Non Extensible Unit with 1 No. Circuit Breakers as Incomer-1 & 1 No. Load break switch as Incomer-2 & 1 No. Circuit Breaker as Outgoing to Transformer		-	-	-	-	-
				-	-	-	-	-
		3 Way, 11kV, 21KA / 3 Sec, indoor non extensible free standing metal clad SF6 insulated ring main unit type comprising of incoming one number manual operated tee-off SF 6 insulated vacuum circuit breaker and one number manual operated 630A fault making / load breaking switch and outgoing one number manual operated tee-off SF 6 insulated vacuum circuit breaker suitable for 11KV, 3C 300 Sqmm XLPE Al Cable complete with all accessories as listed below:		-	-	-	-	-
		a) IDMT RELAY- Self Powered, Microprocessor based numerical 3 Nos. O/C +1 No. E/F (with inbuilt tripping mechanism - my top or equivalent) with LCD display - ON/OFF/Trip. (Incomer breakers shall have bidirectional protection)		-	-	-	-	-
		b) Dual core CT's for protection & metering, cast resin type and of suitable ratio & burden, (Class-1 for metering & class 5P20 for protection).		-	-	-	-	-
		c) Cast Resin PT's of 11000V/3/110V/√3 ratio of Class-1 accuracy & of suitable burden with HV fuse on primary side & MCB / MPCB on secondary side.		-	-	-	-	-
		d) The Ring Switches and Tee-Off Circuit Breaker are provided with Integrated Earthing Switches with Making Capacity.		-	-	-	-	-
		e) Live cable indicator for ring switches.		-	-	-	-	-
		f) Shunt trip coil rated for 24V DC		-	-	-	-	-
		g) SF6 Gas pressure indicator.		-	-	-	-	-
		h) Padlocking facility.		-	-	-	-	-
		i) Mechanical indications for breaker ON / OFF / TRIP		-	-	-	-	-
		j) BMS multifunction meter (A, V, Hz, KW, KWH, KVA, KVAH, KVAR, KVARH)		-	-	-	-	-
		k) Line Voltage presence indicator.		-	-	-	-	-
		l) Transformer Auxiliary Relay with alarm & trip contacts for Winding temperature, Oil temperature, Buchholz		-	-	-	-	-
		m) Emergency 'OFF' Push buttons		-	-	-	-	-
		n) Manual ON/OFF Push buttons		-	-	-	-	-
		o) 8 Windows annunciator. (Remote location i.e. inside LT Panel room)		-	-	-	-	-
		p) Trip circuit healthy indication		-	-	-	-	-
		q) 230V AC / 24V DC Power Pack of suitable capacity		-	-	-	-	-
		r) CFL based bulk head light fixture with limit switch in the HT Compartment.		-	-	-	-	-

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		B) TRANSFORMER						
		11KV/415V, 750 kVA three phase, Dyn11, tapping + 5% to - 5% in steps of 2.5% off load Tap changer, CU/CU Winding Hermetically Sealed ONAN Transformer with standard accessories :1 No.						
		(Transformer shall be minimum acceptable losses at 50% & 100% load as defined in IS-1180 level-1 losses.)						
		Door interlock to trip HT breaker on opening of transformer compartment door (only in transformer's with off circuit tap changer).						
		C) LT SIDE						
		1 No. 4 pole 1000 A 50kA manually operated fixed type ACB with microprocessor based O/L, S/C & E/F releases. lcs = lcu =low 100% for the breakers with suitable flange & busbar for Busduct (IP65) connection						
		CFL based bulk head light fixture with limit switch in the LT Compartment.						
		Note:						
		LT side metering shall include: 1set of LT cast resin CT's, PT's & <u>BMS multifunction meter</u> (A.V, Hz, PF, KW, KWH, KVA, KVAH, KVAR), LED TYPE R Y B indication lamps, ON/OFF/ Trip indication lamps, control MCB's / MPCB's of required fault withstand and control wiring etc. at the LT side incomer breaker.						
2.01	NSR	Supply, Installation, Testing & commissioning of Constant Voltage Constant Current Battery Charger with float & boost charging, 100AH, 24V DC output, with potential free contact with maintenance free batteries (30 min backup in fully charger condition) complete with all Accessories like insulators, clamps, bimetal connectors, M.S.support rack etc as per specifications & with DC DB having 6nos 10Amps MCB's.	Set	1	-	-	Incl. Above	
		Total Carried to Summary						44614761
2		SUBHEAD 2 - D.G. SETS						
2.1	NSR	DG SET IN ACCOUSTIC ENCLOSURE WITH REMOTE RADIATOR COMPLETE WITH FOLLOWING	Set	1	-	-	19125000	19125000
		Design, Manufacture, Supply, Unloading & shifting, Installation, testing, commissioning and alignment at site of Prime Duty continuous rated 4 stroke, Slient type , 2250 kVA DG Set with an alternator of 2500 KVA comprising of Engine of 1500 rpm, remote Radiator Cooled (to be mounted on top of DG set) , 11 KV 50 Hz- 3 phase prime (actual) rating diesel generating set (11000 Volts Alternator with PCCM or equivalent). With electronic AVR mounted on a common base frame. Alternator 2500 KVA F to B derated to 2250 KVA for F to B & 50 deg.C Alternator shall be complete with suitable terminal box with Aluminium link work to accomodate the Aluminium Armoured cables as may be required. Along with its Exhaust pipe & its insulation with all supporting structure & as per CPCB norms complete as required. Engine shall not be derated upto 50 deg.C ambient and suitable for bearing the starting current after changeover. Note- DG set shall be auto start within 3 seconds.						
		NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition						
		Supply, installation, testing and commissioning of DG Set shall be complete with following accessories:						
		Suitable size fuel pipe for connecting diesel engine to individual day service tank including supply and fixing of required valves & filters etc. as required.						
		a) 3mm thick MS painted 990 litres Day Oil Tank with float & board level indicator Integral fuel tank to be supplied with content level indicator, fuel fill cap, fuel feed and return lines to engine and drain plug. Hi/Lo level control with necessary support frame gauge glass. supply shut off valve, vent.						
		b) Fully charged Lead Acid batteries with painted angle iron stand						
		c) Battery leads						
		d) Residential Silencer & Flexible coupling / Bellows						
		e) Base frame with Anti vibration mountings as required.						
		Supplying and fixing of suitable sizes Heavy class MS pipe for DG exhaust complete with bends, elbow, flanges etc including silencer and catalytic convertor exhaust pipe chimney 30 meter high or as per CPCB norms for exhaust of DG sets including foundation of chimney , fixing of LED Aviation light including its wiring , lighting arrestor including conser strips and earthing (2 strip per light aresstor and two earth pits						
		Supply and fixing of 50mm thick compressed mineral wool insulation (Rock wool) for D.G. exhaust pipe with 24 gauge aluminium sheet cladding etc. as required for the under mentioned dia pipe.						
		O/M Manuals, Test Certificates & Warranty certificates :						
		DG Set shall have 1 set (Original) + 3 sets photocopies of engine & alternator O/M manuals, Test certificates of Engine & alternator, warranty certificates of engine, Alternator & Batteries etc.						
		Fuel Pump & Governor :						
		Engine fuel pump shall be with electrically operated actuator & electronic / digital governor suitable for synchronization.						
		Alternator AVR:						
		Alternators shall be suitable for synchronization i.e. AVR with droop facility.						
		DG Set Controller:						
		The DG Set shall be complete with DG Controller. The controller shall be able to perform the following functions & monitor various parameters::						
		a) Perform following functions:						
		i) Manual Start / Stop facility through key / Push button & with remote input acceptance for remote start and with cranking relay. It should be able to perform AMF, Auto synchronizaton and Auto load sharing of DG Sets.						
		b) Engine monitoring & protection:						
		Lub oil pressure						
		Coolant temperature						
		Engine Speed						
		Run Hour						
		Battery Voltage						
		Low Lub oil pressure & warning						
		High coolant temp. warning & shut down						
		Low coolant level shut down						
		Over speed shut down						
		Charging failure indication						
		Low / high battery voltage warning						
		Fail to Crank / Fail to start / Shut down						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
				Total for all blocks				
		Notes:						
		1) Accoustic enclosure to maintain 75dB at 1 mtr distance @ 75% load, from enclosure in all the direction.						
		2) Installation complete with AVM mounting, leveling and commissioning of D.G. Set and co-ordination with other agencies etc. complete with attached and allied accessories like silencer, fuel tank and batteries etc.						
		3) All DG Sets in the out door installation irrespective of capacity has to be with acoustic hoods.						
		4) Vendor / supplier to check, verify and confirm to Owner / PMC the size of the exhaust pipe for the DG sets as per site requirement based on back-pressure calculations before quoting and supply, irrespective of what is mentioned in this BOQ/Specifications.						
		5) Vendor / supplier to check, verify and confirm to Owner / PMC the ventilation requirement being provided for the DG Set area.						
		Any other item required for completion of system above (D.G. set).Complete as required in ready to use condition is in the scope of the contractor.						
2.2	NSR	DG SET IN ACCOUSTIC ENCLOSURE WITH REMOTE RADIATOR COMPLETE WITH FOLLOWING	Set	1		-	8500000	8500000
		Design, Manufacture, Supply, Unloading & shifting, Installation, testing, commissioning and alignment at site of Prime Duty continuous rated 4 stroke, Slient type , 1000 kVA DG Set with an alternator of 1250 KVA comprising of Engine of 1500 rpm, remote Radiator Cooled (to be mounted on top of DG set) , 11 KV 50 Hz- 3 phase prime (actual) rating diesel generating set (11000 Volts Alternator with PCCM or equivalent), With electronic AVR mounted on a common base frame. Alternator 1250KVA F to B derated to 1000 KVA for F to B & 50 deg.C Alternator shall be complete with suitable terminal box with Aluminium link work to accomodate the Aluminium Armoured cables as may be required. Along with its Exhaust pipe & its insulation with all supporting structure & as per CPCB norms complete as required. Engine shall not be derated upto 50 deg.C ambient and suitable for bearing the starting current after changeover. Note- DG set shall be auto start within 3 seconds.						
		NOTE : Interconnection of all control Cable and Accessories etc complete in the scope of supply, including Foundation as per manufacture recommendations & complete in ready to use condition						
		Supply, installation, testing and commissioning of DG Set shall be complete with following accessories:						
		Suitable size fuel pipe for connecting diesel engine to individual day service tank including supply and fixing of required valves & filters etc. as required.						
		a) 3mm thick MS painted 990 litres Day Oil Tank with float & board level indicator Integral fuel tank to be supplied with content level indicator, fuel fill cap, fuel feed and return lines to engine and drain plug. Hi/Lo level control with necessary support frame gauge glass. supply shut off valve, vent.						
		b) Fully charged Lead Acid batteries with painted angle iron stand						
		c) Battery leads						
		d) Residential Silencer & Flexible coupling / Bellows						
		e) Base frame with Anti vibration mountings as required.						
		Supplying and fixing of suitable sizes Heavy class MS pipe for DG exhaust complete with bends, elbow, flanges etc including silencer and catalytic convertor exhaust pipe chimney 30 meter high or as per CPCB norms for exhaust of DG sets including foundation of chimney , fixing of LED Aviation light including its wiring , lighting arrestor including copper strips and earthing (2 strip per light aresstor and two earth pits with cooper plate earthing) 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 24 gauge aluminium sheet cladding etc. as required for the under mentioned dia pipe.						
		O/M Manuals, Test Certificates & Warranty certificates :						
		DG Set shall have 1 set (Original) + 3 sets photocopies of engine & alternator O/M manuals, Test certificates of Engine & alternator, warranty certificates of engine, Alternator & Batteries etc.						
		Fuel Pump & Governor :						
		Engine fuel pump shall be with electrically operated actuator & electronic / digital governor suitable for synchronization.						
		Alternator AVR:						
		Alternators shall be suitable for synchronization i.e. AVR with droop facility.						
		DG Set Controller:						
		The DG Set shall be complete with DG Controller. The controller shall be able to perform the following functions & monitor various parameters::						
		a) Perform following functions:						
		i) Manual Start / Stop facility through key / Push button & with remote input acceptance for remote start and with cranking relay. It should be able to perform AMF, Auto synchronization and Auto load sharing of DG Sets.						
		b) Engine monitoring & protection:						
		Lub oil pressure						
		Coolant temperature						
		Engine Speed						
		Run Hour						
		Battery Voltage						
		Low Lub oil pressure & warning						
		High coolant temp. warning & shut down						
		Low coolant level shut down						
		Over speed shut down						
		Charging failure indication						
		Low / high battery voltage warning						
		Fail to Crank / Fail to start / Shut down						
		Notes:						
		1) Accoustic enclosure to maintain 75dB at 1 mtr distance @ 75% load, from enclosure in all the direction.						
		2) Installation complete with AVM mounting, leveling and commissioning of D.G. Set and co-ordination with other agencies etc. complete with attached and allied accessories like silencer, fuel tank and batteries etc.						
		3) All DG Sets in the out door installation irrespective of capacity has to be with acoustic hoods.						
		4) Vendor / supplier to check, verify and confirm to Owner / PMC the size of the exhaust pipe for the DG sets as per site requirement based on back-pressure calculations before quoting and supply, irrespective of what is mentioned in this BOQ/Specifications.						
		5) Vendor / supplier to check, verify and confirm to Owner / PMC the ventilation requirement being provided for the DG Set area.						
		Any other item required for completion of system above (D.G. set).Complete as required in ready to use condition is in the scope of the contractor.						
		Under Ground Diesel Tank						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		Design, supply, installation, testing & commissioning of 20 KL underground MS diesel tank including all realted civil works foundation, fencing, platform, for unloading of diesel . Flame proof push buttons, pumps (one working & one standby) for supplying of diesel from this UG tank to day tanks of all the DG sets complete with cabling, earthing, piping, float switches etc.Extinguishers shall be as per fire norms, including all necessary approvals from chief controller of explosives.	set	1	-	-	3000000	3000000
		Total Carried to Summary						30625000
3.0		SUBHEAD 3-HT CABLING & SUBSTATION AUXILLARIES						
3.1		Supply & Testing of 11KV 3C XLPE earthed / unearthed cables including all accessories, supports etc. as specified and shown on drawings complete.						
3.1.1	NSR	3 C 400 sqmm XLPE AL	meter	1,600			1,865	2984000
3.1.2	NSR	3 C 300 sqmm XLPE AL	meter	9,080			1,563	14192040
3.1.3	NSR	3 C 240 sqmm XLPE AL	meter	50			1,356	67800
3.1.4	NSR	3 C 185 sqmm XLPE AL	meter	260			1,145	297700
3.1.5	NSR	1 C 185 sqmm XLPE AL	meter	260			440	114400
3.2		HT Cable Terminations						
3.2.1		Supply, Installation & testing of Indoor Type Heat shrinkable cable end terminations with glands, lugs, compound etc. as specified for the above XLPE cables.						
3.2.1.1	NSR	11KV, 3 C 400 sqmm XLPE AL	Each	7			16,694	116858
3.2.1.2	NSR	11KV, 3 C 300 sqmm XLPE AL	Each	19			15,095	286805
3.2.1.3	NSR	11KV, 3 C 240 sqmm XLPE AL	Each	2			14,562	29124
3.2.1.4	NSR	11KV, 3 C 185 sqmm XLPE AL	Each	5			12,856	64280
3.2.1.5	NSR	11KV, 1 C 185 sqmm XLPE AL	Each	6			9,231	55386
3.2.2		Supply, Installation & testing of Outdoor Type Heat shrinkable cable end terminations with glands, lugs, compound etc. as specified for the above XLPE cables.						
3.2.2.1	NSR	11KV, 3 C 400 sqmm XLPE AL	Each	3			17,761	53283
3.2.2.2	NSR	11KV, 3 C 300 sqmm XLPE AL	Each	25			16,161	404025
3.2.2.3	NSR	11KV, 3 C 240 sqmm XLPE AL	Each	2			15,628	31256
3.2.2.4	NSR	11KV, 3 C 185 sqmm XLPE AL	Each	5			14,029	70145
3.2.2.5	NSR	11KV, 1 C 185 sqmm XLPE AL	Each	5			10,297	51485
3.3		Cable laying underground						
3.4	NSR	Supply, Installation & Testing of Soak Pits for transformers complete with necessary materials (pipe, civil work, pebbels etc.) as per IS 10028 Part II	Each	6			2,116	12698.4
3.5	8.1	Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 11KV grade of following size direct in ground including excavation, sand cushioning, protective covering & refilling the trench etc as required.						
3.5.1	8.1.2	Above 120 sqmm and upto 400sqmm	meter	950	298	2,83,100		
3.6	8.2	Laying of one number additional PVC insulated and PVC sheathed/XLPE power cable of 11KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering & refilling the trench etc as required.						
3.6.1	8.2.2	Above 120 sqmm and upto 400sqmm	meter	550	212	1,16,600		
3.7	8.3	Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 11KV grade of following size in existing RCC/HUME/METAL pipe as required						
3.7.1	8.3.2	Above 120 sqmm and upto 400sqmm	meter	5,700	65	3,70,500		
3.8		Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 11KV grade of following size in existing Cable Trench as required						
3.8.1	NSR	Above 120 sqmm and upto 400sqmm	meter	4,500			74	333000
		Total Carried to Summary				7,70,200		19164285.40
4		SUBHEAD 4- MAIN LT , CAPACTIOR & MV PANELS						
4.0		MV PANELS						
		Design, manufacture, assembly, wiring, testing at works and supply to site, installation, testing of following panels / distribution boards / switch boards. The boards shall be designed and fabricated as per general specifications, technical details, specifications and notes as part of this tender /BOQ and relevant IS codes.						
		Also, refer to General Notes and Specifications for Panels/ Boards						
		GENERAL NOTES:						
		MCCB's shall be of 3P or 4P as called for in the BOQ.						
		Ics = Icu =Icw 100% for the ACB						
		Ics = Icu 100% for the MCCB						
		If nothing is specified in the BOQ, MCCB's upto 250A shall be only with magnetic release for motor duty and shall be with thermal magnetic release upto 250A for non motor duty and above 250A shall be with microprocessor based releases - motor duty / non motor duty as the case may be. MCCB's shall be with extended rotary handle.						
		For UPS output panels, MCCB's shall be of 3Pole with 2N, neutral links (twice rated neutral link).						
		Exact rating (Amps), Poles, Type/Duty, Short circuit rating of MCCB is to be selected by the contractor as per load, fault and requirement and also approval taken.						
		Vendor to ensure selection of MCCB & MCB through cascading effect to mitigate the prospective fault circuit current.						
		Panels & busbars shall be rated for Short circuit capacity as specified in SLD & minimum is shall be rated for 300A continous current carrying capacity. Panels & busbars shall be rated for 40 deg C ambient temperature plus 50 deg C temperature rise at full rating of breaker						
		GENERAL NOTES FOR TRANSIENT VOLTAGE SURGE SUPPRESSOR (TVSS):						
		Transient Voltage Surge Suppressors (TVSS) shall be mounted out side the panel / switch board in a sheet steel enclosure.						
		It shall be suitable for handling required (specified) surge handling capacity, shall be 10 modes protection with noise filters (EMI & RFI) and with inbuilt back up fuse protection.						
		Surge suppressor shall be complete with isolating / protective device in the form of MCB / MCCB of KA rating (breaking capacity) as of switch board.						
		Only one make of switchgear to be used in a board /panel.						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
4.1	NSR	NORMAL LIGHTING & POWER PANEL (NLPP)-RESIDENTIAL BLOCK (Type III, TYPE IV & TYPE V)	JOB	3	-	-	3,73,707.00	1121121
		Supplying, Installation, testing, commissioning of Compartmentalized cubical panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:						
		INCOMER:						
		630A TPN MCCB of short circuit capacity of 11KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories						
		Microprocessor release for overcurrent, Earth fault & short circuit protection						
		Independent manual spring closing mechanism						
		Extended Rotary Handle Mechanism -1Nos						
		Spreader Links For 3P MCCB 630A -2 sets						
		Phase Barrier For MCCB 630A-1Nos						
		Surge Protection device-1no						
		Aux Contact Block For MCCB 630A-1set						
		Digital Type Load manager+RS 485 PORT 96sqmm With Builtin Selector Switch CTS CL-1-1Nos						
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB						
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB						
		TPN MCB 6 Amps-1Nos						
		Shunt trip coil-220V AC-1Nos						
		BUSBARS:						
		800 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 11KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports						
		OUTGOING:						
		3 Nos 160A TPN MCCB of short circuit capacity of 11KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories						
		Thermal magnetic release for overcurrent & short circuit protection-3set						
		Independent manual spring closing mechanism-3set						
		Knob -3No						
		Spreader Links For TPN MCCB 160A -6 sets						
		Phase Barrier For MCCB 160A-3No						
		Aux Contact Block For MCCB 160A-3set						
		LED Type Indicating lamps On with 2A back up MCB-3Nos						
		TPN MCB 6 Amps-3Nos						
		Shunt trip coil-220V AC-3Nos						
		12 Nos 100A TPN MCCB of short circuit capacity of 11KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories						
		Thermal magnetic release for overcurrent & short circuit protection-12set						
		Independent manual spring closing mechanism-12set						
		Knob -12No						
		Spreader Links For TPN MCCB 100A -24 sets						
		Phase Barrier For MCCB 100A-12No						
		Aux Contact Block For MCCB 100A-12set						
		LED Type Indicating lamps On with 2A back up MCB-12Nos						
		TPN MCB 6 Amps-12Nos						
		Shunt trip coil-220V AC-12Nos						
4.2	NSR	FLOOR METERINGPANEL(FML)-RESIDENTIALBLOCK(TYPE-2 /TYPE-3 / TYPE-4 / TYPE-5)	JOB	33	-	-	1,47,420	4864860
		Supplying, Installation, testing, commissioning of Compartmentalized cubical panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:						
		INCOMER:						
		1 Nos 100A TPN MCCB of short circuit capacity of 11KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories						
		Thermal magnetic release for overcurrent & short circuit protection-1set						
		Independent manual spring closing mechanism-1set						
		Knob -1No						
		Spreader Links For TPN MCCB 100A -2 sets						
		Phase Barrier For MCCB 100A-1No						
		Aux Contact Block For MCCB 100A-1set						
		LED Type Indicating lamps On,Off -2Nos with 2A back up MCB						
		TPN MCB 6 Amps-1Nos						
		Shunt trip coil-220V AC-1Nos						
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 11KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports						
		OUTGOING:						

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		9Nos. 63A FP MCB, with Dual source KWH meter, Class-1 accuracy, (Direct reading type without CT's) 0-80A, 3 Phase, 4 Wire with auto cut-off, With pre-paid facility / Post paid facility with room unit and complete with internal HR FRLS PVC Insulated unsheathed flexible copper conductor wiring of adequate size and input & output wiring terminal blocks as required.	-	-	-	-	-	-
4.4	NSR	375KVAR CAPACITOR PANEL SUBSTATION -2 (CPP-1-SS2 & CPP-2-SS2)	JOB	4	-	-	9,00,000	3600000
		Supplying, Installation, testing, commissioning of Compartmentalized cubical panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		INCOMERS:		-				
		1 Nos of 800A TPN MCCB of short circuit capacity of 36KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Microprocessor release for overcurrent, Earth fault & short circuit protection-1set		-				
		Independent manual spring closing mechanism-1set		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For 3P MCCB 800A -2 sets		-				
		Phase Barrier For MCCB 800A-1Nos		-				
		Aux Contact Block For MCCB 800A-1set		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC-1Nos		-				
		Digital Ammeter 96sqmm With Builtin Selector Switch for current rating selection , CTs CL-1-1Nos		-				
		Digital Voltmeter 96sqmm With Builtin Selector Switch for current rating selection , CTs CL-1-1Nos		-				
		Intelligent microprocessor based APFC realy with current sensing of less than 1% with selector switch 10 steps		-				
		Day/ night switch		-				
		BUSBARS:		-				
		1000 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 36KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colourd sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		2 Nos 100KVAR capacitor Bank ,525V, MPP type with 14% Detuned reactor, heavy duty, Thyristorised switching module with suitable fuse Backup.		-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos		-				
		TPN MCB 6 Amps-2Nos		-				
		2 No. 50KVAR capacitor Bank ,525V, MPP type with 14% Detuned reactor, heavy duty, Thyristorised switching module with suitable fuse Backup.		-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos		-				
		TPN MCB 6 Amps-2Nos		-				
		3 Nos.25KVAR capacitor Bank ,525V, MPP type with 14% Detuned reactor, heavy duty, Thyristorised switching module with suitable fuse Backup.		-				
		LED Type Indicating lamps On with 2A back up MCB-3Nos		-				
		TPN MCB 6 Amps-3Nos		-				
		1Nos Thyristorised switching module with suitable fuse Backup for 100KVAR as a spare feeder.		-				
		LED Type Indicating lamps On with 2A back up MCB-1Nos		-				
		TPN MCB 6 Amps-1Nos		-				
		1Nos Thyristorised switching module with suitable fuse Backup for 50KVAR as a spare feeder.		-				
		LED Type Indicating lamps On with 2A back up MCB-1Nos		-				
		TPN MCB 6 Amps-1Nos		-				
4.5	NSR	COMMON SERVICE POWER PANEL (CSPP) RESIDENTIALBLOCK(TYPE-2 / TYPE-3 / TYPE-4/ TYPE-5)	JOB	5	-	-	55,207	276035
		Supplying, Installation, testing, commissioning of Compartmentalized cubical panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		INCOMERS:		-				
		1No 125A TPN MCCB of short circuit capacity of 11KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release for overcurrent & short circuit protection-1sets		-				
		Independent manual spring closing mechanism-1sets		-				
		Knob -1Nos		-				
		Spreader Links For TPN MCCB 125A -2 sets		-				
		Phase Barrier For MCCB 125A-1Nos		-				
		Aux Contact Block For MCCB 125A-1set		-				
		Digital Ammeter 96sqmm With Builtin Selector Switch for current rating selection , CTs CL-1-1Nos		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC-1Nos		-				
		BUSBARS:		-				

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 11KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		6Nos. 40A TPN MCB		-				
		5Nos. 25A DP MCB		-				
		1Nos. 63A TPN MCB		-				
		1Nos. 25A TPN MCB		-				
				-				
4.7	NSR	MAIN DISTRIBUTION BOARD-DIRECTOR BUNGALOW (MDB_DB)-RESIDENTIAL BLOCK	JOB	1	-	-	53,387	53387
		Supplying, Installation, testing, commissioning of Compartmentalized cubical panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x 5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:		-				
		INCOMERS:		-				
		1Nos 125A TPN MCCB of short circuit capacity of 11KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1sets		-				
		Independent manual spring closing mechanism-1sets, Knob -1Nos		-				
		Dual source KWH meter, Class-1 accuracy, (Direct reading type without CT's) 0-80A, 3 Phase, 4 Wire with auto cut-off, With pre-paid facility / Post paid facility with room unit and complete with internal HR FRLS PVC Insulated unshathed flexible copper conductor wiring of adequate size and input & output wiring terminal blocks as required. LED Type ON Indicating lamps with 2A back up MCB		-				
		Spreader Links For TPN MCCB 125A -2 sets		-				
		Phase Barrier For MCCB 125A-1Nos		-				
		Aux Contact Block For MCCB 125A-1set		-				
		Digital Ammeter 96sqmm With Builtin Selector Switch for current rating selection , CTs CL-1-1Nos		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC-1Nos		-				
				-				
		BUSBARS:		-				
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 11KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		3Nos. 40A FP MCB		-				
		4Nos. 63A FP MCB		-				
		1Nos. 25A TPN MCB		-				
				-				
4.8	NSR	COMMON SERVICE POWER PANEL (CSPP-UG BOYS)	JOB	1	-	-	2,40,847	240847
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x 5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:		-				
		INCOMER:		-				
		630A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection		-				
		Surge Protection device-1no		-				
		Independent manual spring closing mechanism		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For 3P MCCB 630A -2 sets		-				
		Phase Barrier For MCCB 630A-1Nos		-				
		Aux Contact Block For MCCB 630A-1set		-				
		Digital Type Load manager+RS 485 PORT 96sqmm With Builtin Selector Switch CL-1-1Nos		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC		-				
				-				
		BUSBARS:		-				
		800 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		16Nos. 40A TPN MCB		-				
		2Nos. 63A TPN MCB		-				

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		2Nos 100A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-2sets		-				
		Independent manual spring closing mechanism-2sets		-				
		Knob -2Nos		-				
		Spreader Links For TPN MCCB 100A -4 sets		-				
		Phase Barrier For MCCB 100A-2Nos		-				
		Aux Contact Block For MCCB 100A-2set		-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
		1Nos 200A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection		-				
		Independent manual spring closing mechanism-1sets		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For TPN MCCB 200A -2 sets		-				
		Phase Barrier For MCCB 200A-1Nos		-				
		Aux Contact Block For MCCB 200A-1set		-				
		LED Type Indicating lamps On with 2A back up MCB-1Nos		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC-1Nos		-				
4.9	NSR	MAIN POWER PANEL (MPP-UG BOYS)	JOB	1	-	-	1,29,827	129827
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		INCOMER:		-				
		200A TPN MCCB of short circuit capacity of 16KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection		-				
		Independent manual spring closing mechanism		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For 3P MCCB 200A -2 sets		-				
		Phase Barrier For MCCB 200A-1Nos		-				
		Aux Contact Block For MCCB 200A-1set		-				
		Digital Ammeter-RS 485 PORT 96sqmm With Builtin Selector Switch CL-1-1Nos		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC		-				
		BUSBARS:		-				
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		16Nos. 40A TPN MCB		-				
		2Nos. 63A TPN MCB		-				
		1No. 25A DP MCB		-				
4.10	NSR	EMERGENCY POWER PANEL (EPP-UG BOYS)	JOB	1	-	-	1,12,840	112840
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		1no 200A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection		-				
		Independent manual spring closing mechanism-2sets		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For TPN MCCB 200A -2 sets		-				
		Phase Barrier For MCCB 200A-1Nos		-				
		Aux Contact Block For MCCB 200A-2set		-				
		Digital Ammeter with Builtin Selector Switch		-				
		LED Type Indicating lamps R,Y,B -6Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -6Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
		BUSBARS:		-				
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		OUTGOING:	-	-				
		5Nos. 40A TPN MCB	-	-				
		1Nos. 32A TPN MCB	-	-				
		1Nos. 25A DP MCB	-	-				
		2Nos 63A TPN MCCB of short circuit capacity of 16KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-2sets	-	-				
		Independent manual spring closing mechanism-2sets	-	-				
		Knob -2Nos	-	-				
		Spreader Links For TPN MCCB 63A -4 sets	-	-				
		Phase Barrier For MCCB 63A-2Nos	-	-				
		Aux Contact Block For MCCB 63A-2set	-	-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos	-	-				
		TPN MCB 6 Amps-2Nos	-	-				
		Shunt trip coil-220V AC-2Nos	-	-				
			-	-				
4.11	NSR	MAIN LIGHTING PANEL-01 (MLP-01-UG BOYS)	JOB	1	-	-	63,093	63093
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:	-	-				
		INCOMER:	-	-				
		63A TPN MCCB of short circuit capacity of 10KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection	-	-				
		Independent manual spring closing mechanism	-	-				
		Knob -1Nos	-	-				
		Spreader Links For 3P MCCB 63A -2 sets	-	-				
		Phase Barrier For MCCB 63A-1Nos	-	-				
		Aux Contact Block For MCCB 63A-1set	-	-				
		Digital Ammeter+RS 485 PORT 96sqmm With Builtin Selector Switch CL-1-1Nos	-	-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB	-	-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB	-	-				
		TPN MCB 6 Amps-1Nos	-	-				
		Shunt trip coil-220V AC	-	-				
		BUSBARS:	-	-				
		300Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 10KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports	-	-				
		OUTGOING:	-	-				
		18Nos. 25A DP MCB	-	-				
		1No. 25A TPN MCB	-	-				
4.12	NSR	MAIN LIGHTING PANEL-02 (MLP-02-UG BOYS)	JOB	1	-	-	63,093	63093
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:	-	-				
		INCOMER:	-	-				
		63A TPN MCCB of short circuit capacity of 10KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection	-	-				
		Independent manual spring closing mechanism	-	-				
		Knob -1Nos	-	-				
		Spreader Links For 3P MCCB 63A -2 sets	-	-				
		Phase Barrier For MCCB 63A-1Nos	-	-				
		Aux Contact Block For MCCB 63A-1set	-	-				
		Digital Ammeter+RS 485 PORT 96sqmm With Builtin Selector Switch CL-1-1Nos	-	-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB	-	-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB	-	-				
		TPN MCB 6 Amps-1Nos	-	-				
		Shunt trip coil-220V AC	-	-				
		BUSBARS:	-	-				
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 10KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports	-	-				
		OUTGOING:	-	-				
		18Nos. 25A DP MCB	-	-				
		1No. 25A TPN MCB	-	-				
4.13	NSR	COMMON SERVICE POWER PANEL (CSPP-UG GIRLS)	JOB	1	-	-	1,64,407	164407

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		INCOMER:		-				
		400A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection		-				
		Surge Protection device-1no		-				
		Independent manual spring closing mechanism		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For 3P MCCB 400A -2 sets		-				
		Phase Barrier For MCCB 400A-1Nos		-				
		Aux Contact Block For MCCB 400A-1set		-				
		Digital Type Load manager+RS 485 PORT 96sqmm With Buitin Selector Switch CL-1-1Nos		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC		-				
		BUSBARS:		-				
		630 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		15Nos. 40A TPN MCB		-				
		2Nos. 63A TPN MCB		-				
		1Nos 63A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1sets		-				
		Independent manual spring closing mechanism-1sets		-				
		Knob -1Nos		-				
		Spreader Links For TPN MCCB 63A -2 sets		-				
		Phase Barrier For MCCB 63A-1Nos		-				
		Aux Contact Block For MCCB 63A-1set		-				
		LED Type Indicating lamps On with 2A back up MCB-1Nos		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC-1Nos		-				
		2Nos 100A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-2sets		-				
		Independent manual spring closing mechanism-2sets		-				
		Knob -2Nos		-				
		Spreader Links For TPN MCCB 100A -4 sets		-				
		Phase Barrier For MCCB 100A-2Nos		-				
		Aux Contact Block For MCCB 100A-2set		-				
		LED Type Indicating lamps On with 2A back up MCB-1Nos		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC-1Nos		-				
4.14	NSR	EMERGENCY POWER PANEL (EPP-UG GIRLS)	JOB	1	-	-	92,213	92213
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		1No 160A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-2sets		-				
		Independent manual spring closing mechanism-2sets		-				
		Extended Rotary Handle Mechanism -2Nos		-				
		Spreader Links For 4P MCCB 160A -2 sets		-				
		Phase Barrier For MCCB 160A-1Nos		-				
		Aux Contact Block For MCCB 160A-1set		-				
		Digital Ammeter with Buitin Selector Switch		-				
		LED Type Indicating lamps R,Y,B -6Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -6Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
		BUSBARS:		-				
		300 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		2Nos. 32A TPN MCB	-	-				
		2Nos. 63A TPN MCB	-	-				
		4Nos. 40A TPN MCB	-	-				
		16Nos. 25A DP MCB	-	-				
4.15	NSR	COMMON SERVICE POWER PANEL-PG BOYS-LHS (CSPP-PGB-01)	JOB	1	-	-	2,53,587	253587
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:	-	-				
		INCOMER:	-	-				
		630A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection	-	-				
		Surge Protection device-1no	-	-				
		Independent manual spring closing mechanism	-	-				
		Extended Rotary Handle Mechanism -1Nos	-	-				
		Spreader Links For 3P MCCB 630A -2 sets	-	-				
		Phase Barrier For MCCB 630A-1Nos	-	-				
		Aux Contact Block For MCCB 630A-1set	-	-				
		Digital Type Load manager+RS 485 PORT 96sqmm With BuiltIn Selector Switch CL-1-1Nos	-	-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB	-	-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB	-	-				
		TPN MCB 6 Amps-1Nos	-	-				
		Shunt trip coil-220V AC	-	-				
		BUSBARS:	-	-				
		800 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports	-	-				
		OUTGOING:	-	-				
		3Nos 100A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-3sets	-	-				
		Independent manual spring closing mechanism-3sets	-	-				
		Knob -3Nos	-	-				
		Spreader Links For TPN MCCB 100A -6 sets	-	-				
		Phase Barrier For MCCB 100A-3Nos	-	-				
		Aux Contact Block For MCCB 100A-3set	-	-				
		LED Type Indicating lamps On with 2A back up MCB-6Nos	-	-				
		TPN MCB 6 Amps-6Nos	-	-				
		Shunt trip coil-220V AC-6Nos	-	-				
		15Nos. 63A TPN MCB	-	-				
		17Nos. 40A TPN MCB	-	-				
4.16	NSR	COMMON SERVICE POWER PANEL-PG BOYS-RHS (CSPP-PGB-02)	JOB	1	-	-	2,32,353	232353
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:	-	-				
		INCOMER:	-	-				
		400A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection	-	-				
		Surge Protection device-1no	-	-				
		Independent manual spring closing mechanism	-	-				
		Extended Rotary Handle Mechanism -1Nos	-	-				
		Spreader Links For 3P MCCB 400A -2 sets	-	-				
		Phase Barrier For MCCB 400A-1Nos	-	-				
		Aux Contact Block For MCCB 400A-1set	-	-				
		Digital Type Load manager+RS 485 PORT 96sqmm With BuiltIn Selector Switch CL-1-1Nos	-	-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB	-	-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB	-	-				
		TPN MCB 6 Amps-1Nos	-	-				
		Shunt trip coil-220V AC	-	-				
		BUSBARS:	-	-				
		630 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports	-	-				
		OUTGOING:	-	-				
		15Nos. 63A TPN MCB	-	-				
		16Nos. 40A TPN MCB	-	-				

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		1No 100A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1set	-	-				
		Independent manual spring closing mechanism-1set	-	-				
		Knob -1No	-	-				
		Spreader Links For TPN MCCB 100A -2 sets	-	-				
		Phase Barrier For MCCB 100A-1No	-	-				
		Aux Contact Block For MCCB 100A-1set	-	-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos	-	-				
		TPN MCB 6 Amps-2Nos	-	-				
		Shunt trip coil-220V AC-2Nos	-	-				
4.17	NSR	GYSER PANEL-PG BOYS-01 (GYSER PANEL-PGB-01)	JOB	1	-	-	1,95,347	195347
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:	-	-				
		INCOMER:	-	-				
		630A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection	-	-				
		Surge Protection device-1no	-	-				
		Independent manual spring closing mechanism	-	-				
		Extended Rotary Handle Mechanism -1Nos	-	-				
		Spreader Links For 3P MCCB 630A -2 sets	-	-				
		Phase Barrier For MCCB 630A-1Nos	-	-				
		Aux Contact Block For MCCB 630A-1set	-	-				
		Digital Type Load manager+RS 485 PORT 96sqmm With BuiltIn Selector Switch CL-1-1Nos	-	-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB	-	-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB	-	-				
		TPN MCB 6 Amps-1Nos	-	-				
		Shunt trip coil-220V AC	-	-				
		BUSBARS:	-	-				
		800 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports	-	-				
		OUTGOING:	-	-				
		18Nos. 63A TPN MCB	-	-				
		1No 160A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1set	-	-				
		Independent manual spring closing mechanism-1set	-	-				
		Knob -1No	-	-				
		Spreader Links For TPN MCCB 160A -2 sets	-	-				
		Phase Barrier For MCCB 160A-1No	-	-				
		Aux Contact Block For MCCB 160A-1set	-	-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos	-	-				
		TPN MCB 6 Amps-2Nos	-	-				
		Shunt trip coil-220V AC-2Nos	-	-				
		1No 100A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1set	-	-				
		Independent manual spring closing mechanism-1set	-	-				
		Knob -1No	-	-				
		Spreader Links For TPN MCCB 100A -2 sets	-	-				
		Phase Barrier For MCCB 100A-1No	-	-				
		Aux Contact Block For MCCB 100A-1set	-	-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos	-	-				
		TPN MCB 6 Amps-2Nos	-	-				
		Shunt trip coil-220V AC-2Nos	-	-				
4.18	NSR	GYSER PANEL-PG BOYS-02 (GYSER PANEL-PGB-02)	JOB	1	-	-	1,89,280	189280
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc,complete as required with following switchgear:	-	-				
		INCOMER:	-	-				
		630A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories	-	-				
		Microprocessor release (EMI & EMC certified) for overcurrent, Earth fault & short circuit protection	-	-				

Sl. No.	Item no. (DSR-16)	Description of Item	Unit	Quantity	DSR 16 (Rs.)		MARKET RATE	
					Rate	Amount	Rate	Total Amount
		Surge Protection device-1no		-				
		Independent manual spring closing mechanism		-				
		Extended Rotary Handle Mechanism -1Nos		-				
		Spreader Links For 3P MCCB 630A -2 sets		-				
		Phase Barrier For MCCB 630A-1Nos		-				
		Aux Contact Block For MCCB 630A-1set		-				
		Digital Type Load manager+RS 485 PORT 96sqmm With Builtin Selector Switch CL-1-1Nos		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-1Nos		-				
		Shunt trip coil-220V AC		-				
		BUSBARS:		-				
		800 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		16Nos. 63A TPN MCB		-				
		1No 160A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1set		-				
		Independent manual spring closing mechanism-1set		-				
		Knob -1No		-				
		Spreader Links For TPN MCCB 160A -2 sets		-				
		Phase Barrier For MCCB 160A-1No		-				
		Aux Contact Block For MCCB 160A-1set		-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
		1No 100A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1set		-				
		Independent manual spring closing mechanism-1set		-				
		Knob -1No		-				
		Spreader Links For TPN MCCB 100A -2 sets		-				
		Phase Barrier For MCCB 100A-1No		-				
		Aux Contact Block For MCCB 100A-1set		-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
4.19	NSR	EMERGENCY POWER PANEL-PG BOYS (EPP-PG BOYS)	JOB	1	-	-	99,493	99493
		Supplying, Installation, testing, commissioning of Compartmentalized cubical type panel board fabricated with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process, powder coating in approved shade along with bottom base MS channel of section not less than 100mm x 50mm x5mm thick, fabrication shall be done in transportable sections, free standing type totally enclosed dust and vermin proof having independent compartments with door having locking and sealing arrangement having suitable space for mounting of Equipment as per SLD, provision for Top/bottom cable entry as per site and including the lugs, panel wiring between busbars and meter, making solid connections between main busbar & all switchgear with required size of Aluminum busbar & control wiring with not less than 2.5Sqmm cu FRLS PVC wires, loop earthing, powder coating with approved shade, providing ventilation arrangement, gaskets, easily openable knobs, lettering etc.complete as required with following switchgear:		-				
		1No 250A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-1set		-				
		Independent manual spring closing mechanism-1set		-				
		Extended Rotary Handle Mechanism -1No		-				
		Spreader Links For 4P MCCB 250A -2 sets		-				
		Phase Barrier For MCCB 250A-1No		-				
		Aux Contact Block For MCCB 250A-1no.		-				
		Digital Ammeter with Builtin Selector Switch		-				
		LED Type Indicating lamps R,Y,B -3Nos with 2A back up MCB		-				
		LED Type Indicating lamps On,Off,Trip -3Nos with 2A back up MCB		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
		BUSBARS:		-				
		400 Amp capacity extensible TPN Aluminium Alloy Busbars of high conductivity, with short circuit withstand capacity of 20KA for 1 second, entire panel shall have common earth busbar with 2 nos. earth stud with heat shrinkable colour sleeves. DMC/SMC busbar supports		-				
		OUTGOING:		-				
		2Nos 63A TPN MCCB of short circuit capacity of 20KA, fitted with interlocked doors, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact conforming to IS 1397-2:1983 as ammended upto the date complete with following accessories		-				
		Thermal magnetic release (EMI & EMC certified) for overcurrent & short circuit protection-2sets		-				
		Independent manual spring closing mechanism-3sets		-				
		Knob -2Nos		-				
		Spreader Links For TPN MCCB 63A -4 sets		-				
		Phase Barrier For MCCB 63A-2Nos		-				
		Aux Contact Block For MCCB 63A-2Nos.		-				
		LED Type Indicating lamps On with 2A back up MCB-2Nos		-				
		TPN MCB 6 Amps-2Nos		-				
		Shunt trip coil-220V AC-2Nos		-				
		6Nos. 40A TPN MCB		-				
		1No. 25A DP MCB		-				
4.20	NSR	MAIN LIGHTING PANEL-01-PG BOYS (MLP-01-PGB)	JOB	1	-	-	64,307	64307