

		PART D2 (Amended)
Ref: NIT No: IITB/Dean (IPS)/CACI/H-19/NIT/R1 dated 31.10.2022		
NAME OF PROJECT - Construction of Hostel No. 19 Building for 1052 students (G+9 upper Storey's) including Finishing works, Water Supply & Sanitary installations, Internal Electrical Installation & Cable laying, Firefighting system, Automatic Fire Alarm & PA System, Lifts, Mechanical Ventilation and Development Works at IIT Bombay		
SUMMARY		
SR. NO.	ITEM DESCRIPTION	AMOUNT (WITHOUT GST)
PART - I	CIVIL WORK AND SITE DEVELOPMENT	71,61,74,633.12
PART - II	PLUMBING WORK	2,24,68,856.10
	TOTAL OF CIVIL WORK	73,86,43,489.22
PART - III	ELECTRICAL WORK	5,94,75,221.56
PART - IV	FIRE ALARM SYSTEM & PUBLIC ADDRESS SYSTEM	1,37,55,631.36
PART - V	FIRE FIGHTING SYSTEM	2,04,77,200.00
PART - VI	WATER SUPPLY PUMPS AND ACCESSORIES / EQUIPMENTS	7,72,267.80
PART - VII	DINING & KITCHEN AREA VENTILATION SYSTEM	57,55,813.56
PART - VIII	ELEVATOR WORK	1,51,01,694.92
	TOTAL OF MEP WORK	11,53,37,829.19
	TOTAL (WITHOUT GST)	85,39,81,318.40
	GRAND TOTAL (WITH 18% GST)	1,00,76,97,955.72

Signature and seal of Tenderer

Sapresh Kamble
(Sr. Project Engineer)

Ashok Naik
OSD

Kalpna Naik
AEE

CACI

Dean (IPS)

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SUMMARY : ITEM-WISE

SR. NO.	ITEM DESCRIPTION	Amount in Rs. (Without GST)
PART - I	CIVIL WORKS AND SITE DEVELOPMENT WORKS	
I	CIVIL WORKS	
A	EXCAVATION & EARTH WORKS	1,83,26,056
B	PLAIN CEMENT CONCRETE & PLUM CONCRETE	1,55,12,885
C	REINFORCED CEMENT CONCRETE	39,25,27,134
D	BLOCK MASONRY WORK	3,13,83,605
E	DOORS AND DOOR FRAMES (WOODWORK)	3,49,30,422
F	STEEL WORK	3,62,82,272
G	FLOORING, SKIRTING AND DADO	7,32,75,900
H	ROOFING WORKS	59,175
J	FINISHING WORKS	5,43,41,805
K	ROAD WORKS	35,65,622
L	ALUMINIUM WINDOWS	2,29,15,638
M	WATER PROOFING	1,30,20,500
N	STRUCTURAL GLAZING ALUMINIUM	1,59,68,078
P	MISCELLANEOUS WORKS	25,99,610
	TOTAL OF SUPER STRUCTURE WORKS	71,47,08,702
II	SITE DEVELOPMENT WORKS	
Q	EXTERNAL AREA WORKS	1,63,215
R	HORTICULTURE	13,02,716
	TOTAL OF SITE DEVELOPMENT WORKS	14,65,932
	TOTAL OF I + II	71,61,74,633
PART - II	PLUMBING	
A	SANITARY WARES AND CP APPURTENANCES	63,44,690
B	INTERNAL WATER SUPPLY SYSTEM	60,00,121

C	EXTERNAL WATER SUPPLY SYSTEM	3,51,266
D	INTERNAL DRAINAGE (SOIL, WASTE & VENT, RAIN WATER)	75,67,281
E	EXTERNAL SEWERAGE & STORM WATER DRAINAGE SYSTEM	22,05,498
	TOTAL OF PLUMBING	2,24,68,856.10
PART -III	ELECTRICAL WORK	
A	MEDIUM VOLTAGE PANELS	1,09,65,877
B	DISTRIBUTION BOARDS	46,15,793
C	LT CABLES, END JOINTS, CABLE MARKER	78,30,834
D	POINT WIRING IN PVC CONDUIT, TELEPHONE WIRING, LAN CABLING ETC.	2,47,99,387
E	LIGHT FIXTURES AND FITTINGS, CEILING FANS & EXHAUST FANS ETC.	72,73,962
F	LIGHTNING PROTECTION SYSTEM	6,38,447
G	EARTHING SYSTEM	19,08,616
H	UPS	14,42,305
	TOTAL OF ELECTRICAL WORKS	5,94,75,222
PART IV	FIRE ALARM SYSTEM & PUBLIC ADDRESS SYSTEM	
A	FIRE ALARM SYSTEM	1,15,52,411
B	PUBLIC ADDRESS SYSTEM	13,78,043
C	IP BASED CCTV SYSTEM (ONLY WIRING)	7,37,712
D	CABLE TV SYSTEM	30,897
E	ACCESS CONTROL SYSTEM	56,568
	TOTAL OF FIRE ALARM SYSTEM, PUBLIC ADDRESS SYSTEM, CCTV SYSTEM & CABLE TV SYSTEM.	1,37,55,631
PART V	FIRE FIGHTING SYSTEM	
A	FIRE FIGHTING SYSTEM	46,27,131
B	INTERNAL & EXTERNAL HYDRANT SYSTEM	50,27,961
C	AUTOMATIC SPRINKLER SYSTEM	1,06,73,468
D	FIRE EXTINGUISHERS	1,48,641
	TOTAL OF FIRE FIGHTING SYSTEM	2,04,77,200
PART VI	WATER SUPPLY PUMPS AND ACCESSORIES / EQUIPMENTS	7,72,268

PART VII	DINING AND KITCHEN AREA VENTILATION SYSTEM	
A	VENTILATIONS FANS FOR FRESH & EXHAUST AIR APPLICATION (Including Kitchen)	19,74,576
B	SHEET METAL WORKS	37,81,237
	TOTAL OF DINING AND KITCHEN AREA VENTILATION SYSTEM	57,55,814
PART VIII	ELEVATORS WORK	
A	PASSENGER ELEVATORS WORK	1,51,01,695
	TOTAL OF PASSENGER ELEVATOR WORK	1,51,01,695
	GRAND TOTAL (I TO VIII)	85,39,81,318.40

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GENERAL IMPORTANT NOTES APPLICABLE TO THIS CONTRACT

(APPLICABLE TO CIVIL, PHWORKS, FIRE FIGHTING, ELECTRICAL WORKS & MECHANICAL VENTILATION WORKS)

In addition to Clause 3.5.2 of Special Conditions of Contract Rate quoted for the items shall also be inclusive of :

A) Statutory traffic regulations in force shall be considered for transporting material labour etc and nothing shall be paid extra on account of the restrictions by the local statutory authorities, Royalty charges for excavation and transporting earth , debris, and other materials.

B) Transporting of material,labour,machinery etc to all heights & including locations of where direct access is non existing and including arranging own arrangement

C) Security Regulations & rules of I.I.T.B, and its constituent units shall be strictly followed while movement/deployment of materials & work forces and Cost arising due to security regulations.

D) Scaffolding to be provided for execution , shall be of Independent Scaffold Conforming to IS 2750 -latest revision.

E) Safety of Labours working at site shall be as per safety code enclosed in the specifications and to be strictly adhered by employing safety engineer. Safety at site is sole responsibility of contractor.

F) Adopting standard operating/ incorporating procedure for Griha requirement during Construction/ post construction.

G) Cement for structural works shall be OPC/PPC ISI marked and duly approved by the Engineer-in-charge.

H) PPC/blended cement of ISI marked shall only be used for finishing works on prior approval of Engineer-in-charge.

I) The approach road should be kept clean & free from obstructions for smooth functioning of existing traffic and damages caused any to be made good without any extra cost to the Department.

J) Tenderers are advised to acquaint themselves with access to site, location of work, local labour problems and any other matter relating to availability and carriage of construction materials.

K) Adequate care should be taken to safeguard the trees existing on the plot while carrying out construction work.

L) Lift licence from lift inspector regarding satisfactory installation and operation should be submitted.

M) The authorised pest control agency to give anti larval treatment on site will be appointed & other requirement as per circular no. AMC/WS/H/9436 dated 29.03.2012 will be complied with.

N) All the debris should be removed after completion of work.

O) The debris management plan shall be submitted to SWM department and NOC for the same shall be submitted.

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
PART I	CIVIL WORKS				
A	EXCAVATION & EARTH WORKS				
1.1	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 50m. etc.complete as per specifications,drawings & as directed by the Engineer-in-charge.				
1.1.1	a)All kinds of soil.	Cum	24200	282.65	68,40,123.74
1.2	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.				
1.2.1	b)Hard rock (blasting prohibited)	Cum	500	1,240.17	6,20,085.35
1.3	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.				
1.3.1	All kinds of soil				
1.3.1.1	for lift beyond 1.5 m up to 3 m	Cum	6500	102.97	6,69,303.95
1.3.1.2	for lift beyond 3 m up to 4.5 m	Cum	5100	205.94	10,50,292.35
1.3.1.3	for lift beyond 4.5 m up to 6 m	Cum	3400	308.91	10,50,292.35
1.3.2	Ordinary or hard rock				
1.3.2.1	for lift beyond 1.5 m up to 3 m	Cum	50	184.66	9,232.80
1.3.2.2	for lift beyond 3 m up to 4.5 m	Cum	150	369.31	55,396.79
1.3.2.3	for lift beyond 4.5 m up to 6 m	Cum	50	553.97	27,698.39
1.3.2.4	for lift beyond 6m and above	Cum	500	738.62	3,69,311.92
1.4	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. etc.complete as per specifications,drawings & as directed by the Engineer-in-charge.	Cum	20000	250.23	50,04,629.72
1.5	Supplying chemical emulsion in sealed containers including delivery as specified. etc.complete as per specifications,drawings & as directed by the Engineer-in-charge.	Litre	60	197.96	11,877.42
	Chlorpyrifos/ Lindane emulsifiable concentrate of 20%				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
1.6	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) : etc.complete as per specifications,drawings & as directed by the Engineer-in-charge.	Rmt	500	197.96	98,979.14
	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.:				
1.7	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc., lead upto 50 m and lift upto 1.5 m : etc.complete as per specifications,drawings & as directed by the Engineer-in-charge.	Cum	1200	535.44	6,42,531.79
	All kinds of soil				
1.8	Providing & Laying stone soling with stone boulders by hand packing and filling the gaps with smaller stones and stone dust/grit , consolidation with watering and ramming etc. complete as per the specifications and as directed by Engineer-in-Charge.	Cum	1450	1,294.00	18,76,300.00
	Total for Earth Work				1,83,26,055.69
B	CONCRETE WORK				
2.1	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 :				
2.1.1	1:1½:3 (1 Cement: 1½ coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	30	7,669.68	2,30,090.29
2.1.2	1:5:10 (1 cement : 5 fine sand derived from natural sources :10 graded stone aggregate 40 mm nominal size derived from natural sources)	Cum	375	5,577.57	20,91,587.15
2.2	Providing and fixing up to floor five level precast cement concrete solid block, including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centering, shuttering complete :				
2.2.1	1:1½:3 (1 Cement: 1½ coarse sand(zone-III) : 3 graded stone aggregate 20 mm nominal size).	Cum	150	9,650.34	14,47,551.46

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
2.3	Providing and laying in position ready mixed concrete specified grade for 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 cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. NOTE- (1) The cementitious content will be as per approved design mix and nothing extra will be paid. (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				
	All works up to Plinth level.				
2.3.1	M-10 grade plain cement concrete	Cum	1050	6,572.58	69,01,208.50
2.4	Providing and laying Plum concrete course in plain ready mix concrete M-10 in layers (not more than 230mm each layer) with evenly distributed stone boulders of size 150mm to 230mm size leaving a minimum gap of 25mm between the boulders and filling the gap with RMC of grade M-10 including mechanical consolidation, finishing, curing, necessary form work etc. all as per specifications , drawings and as directed by the engineer-in-charge. (Cost is excluding stones, available stone shall be used by breaking to required size) Note : Design mix of M-10 shall be governed as per item no.2.5. in foundation and plinth	Cum	1450	3,339.62	48,42,447.51
	Total for Concrete Work				1,55,12,884.91
C	REINFORCED CONCRETE WORK				
3.1	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	Cum	650	10,562.34	68,65,521.32
3.2	Centering and shuttering including strutting, propping etc. and removal of form :				
3.2.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	2700	303.44	8,19,290.11
3.2.2	Walls (any thickness) including attached pilasters, butteresses etc.	Sqm	7900	659.75	52,11,993.24

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
3.2.3	Suspended floors, roofs, landings, balconies and access platform with plastic coated water proof ply 12 mm thick	Sqm	29800	755.33	2,25,08,704.01
3.2.4	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	25000	599.44	1,49,86,052.83
3.2.5	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	13000	792.47	1,03,02,156.90
3.2.6	Stairs, (excluding landings) except spiral-staircases	Sqm	1200	648.12	7,77,742.52
3.2.7	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 Weather shade, Chajjas, corbels etc., including edges.	Sqm	3400	303.44	10,31,698.65
3.3	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).				
3.3.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)- 3.5m to 4.5m	Sqm	5	314.58	1,572.88
3.3.2	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)- 4.5m to 5.5m	Sqm	5	629.15	3,145.75
3.3.3	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)- 5.5m to 6.5m	Sqm	1600	943.73	15,09,961.53
3.4	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
3.4.1	Thermo-Mechanically Treated bars of grade Fe-500D.	Kg	380000	88.34	3,35,68,167.12
3.5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
3.5.1	Thermo-Mechanically Treated bars of grade Fe-500 D.	kg	1600000	88.34	14,13,39,651.03
3.6	Providing and laying in position ready mixed concrete of specified grade for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge.				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	NOTE- (1) The cementitious content will be as per approved design mix and nothing extra will be paid. (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				
3.6.1	All works up to Plinth level.				
3.6.1.1	M-25 Grade	Cum	115	8,556.65	9,84,014.26
3.6.1.2	M-35 Grade	Cum	1300	8,835.65	1,14,86,344.53
3.6.1.3	M-40 Grade	Cum	3000	8,975.13	2,69,25,380.89
3.6.2	All works above plinth & up to floor V level.				
3.6.2.1	M-35 Grade	Cum	7100	10,434.29	7,40,83,482.56
3.6.2.2	M-40 Grade	Cum	3200	10,573.77	3,38,36,066.06
3.7	Extra for R.C.C./ B.M.C/ R.M.C. work above floor V level for each four floors or part thereof.				
3.7.1	Above Floor V up to Floor IX	Cum	3725	276.84	10,31,214.60
3.7.2	Above Floor IX up to Top	Cum	1400	415.25	5,81,355.88
3.8	Providing and fixing parallel threaded couplers conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification", to reinforcement bars including threading, enlargement at connection by forging, protecting the prepared reinforcement bars and related operations as required to complete the works per direction of Engineer-in-Charge. Note: For				
	Reducer Couplers, higher diameter of reducer coupler shall be measured.				
3.8.1	Coupler for 16 mm diameter reinforcement bar	No.	5200	101.05	5,25,451.63
3.8.2	Coupler for 20 mm diameter reinforcement bar	No.	26000	140.91	36,63,558.44
3.8.3	Coupler for 25 mm diameter reinforcement bar	No.	600	201.01	1,20,607.73
3.9	Providing and fixing glass fibre mesh of 22 gauge, with about 30 cm. width at the junction of R.C.C members and brick work, of approved quality including fixing mesh in position by necessary drilling in concrete /B.B.masonry and or tying by binding wire etc. complete. before plastering the junction with cement/gypsum plaster as directed by Engineer-in-charge.	Rmt	6500	56.00	3,64,000.00
	Total for RCC Work				39,25,27,134.47
D	BRICK WORK				
4.1	Providing and laying autoclaved aerated cement blocks masonry with all thick AAC blocks of specified grade 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).	Cum.	4500	6,891.74	3,10,12,815.40

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
4.2	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.				
4.2.1	Above Floor VI up to Floor IX	Cum.	1900	139.92	2,65,849.40
4.2.2	Above Floor IX up to Top	Cum.	500	209.88	1,04,940.55
	Total for Brick Work				3,13,83,605.35
E	WOOD WORK				
5.1	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:and including internal lipping complete as per direction of Engineer-in-charge.				
5.1.1	30 mm thick including Stainless steel butt hinges (heavy weight) 100x60x2.5 mm IS : 12817 marked with necessary screws	Sqm.	5	2,777.23	13,886.15
5.1.2	35 mm thick including Stainless steel butt hinges (heavy weight) 100x60x2.5 mm IS : 12817 marked with necessary screws	Sqm.	5	3,040.91	15,204.56
5.2	30 mm thick Fiber glass Reinforced Plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF)/Polystyrene foam to be used as filler material throughout the hollow panel, casted monolithically with testing parameters of F.R.P. laminate conforming to table- 3 of IS: 14856, complete as per direction of Engineer-in-charge. 30 mm thick including Stainless steel butt hinges (heavy weight) 100x60x2.5 mm IS : 12817 marked with necessary screws	Sqm.	630	3,905.66	24,60,566.26
5.3	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.				
	1.0 mm thick	Sqm.	130	752.81	97,865.69
5.4	Extra for providing opening for vision panel of required size in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :				
5.4.1	Rectangular or square.	Sqm.	200	171.40	34,280.58
5.5	Providing & fixing glass vision panels in flush door shutters with necessary teakwood beading and SS screws. The visible external surfaces of the teakwood beading shall be finished with 3 coats of melamine polish.(Actual area of glass fixed in position shall be measured i/c the portion inside the beading				
5.5.1	6mm thick clear float glass	Sqm.	47	1,626.00	76,422.00

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
5.5.2	6mm thick frosted glass	Sqm.	148	2,400.00	3,55,200.00
5.6	Providing and fixing 12mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & double acting hydraulic floor spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer in charge (Door handle, lock and stopper etc. to be paid separately)	Sqm.	9	4,474.21	40,267.91
5.7	Providing and fixing Door frame and Shutter made of 45mm thick steel fire check door of 120 minutes fire rating confirming to BS: 476 Part 22 and IS: 3614 Part II for stability and integrity , fabricated with 2 nos. 22 gauge thick galvanized steel sheet with infill of fire rated Acrylic Sealant and non-combustible core bonded to both faces of sheet with lock seam joints at stile edges and internal reinforcement at top, bottom and stile edges for Fire Rating. The door frames are manufactured from 18 guage thick galvanised steel pressed from to double rebate profile of size 143mm x 57mm. The frames shall be fixed using canon/ hilti anchor bolts of size 10mm dia x 100mm long. The door frames and door shutters are finished with powder coating paint. The cost includes providing and fixing of minimum two-hour fire rated stainless steel ball bearing hinges 100 mm x 75mm x 3mm (4 hinges per leaf of shutter) and internal lipping	Sqm.	620	7,890.21	48,91,928.84
	Note : The cost includes providing opening for vision panel of required size in shutters (cost of glass excluded) and fixing vision panels of specified size with complete fire rated gasket channel & moulding beading and filling the gap between moulding /beading and glass with suitable sealant.				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
5.8	Providing and fixing factory made solid core minimum 45mm thick one hour fire rated sandwich type composite flush door shutter (Single/ double leaf) of approved make consisting of :a) Providing and fixing in position Second class teak wood lipping of size 15x47mm, including making necessary grooves in the lipping for providing and fixing intumescent strips of required size (10x4mm) as per the manufacturer's specifications, including making required rebates, chamfering and rounding edges, making grooves or any other features, etc. as per the Architectural drawings and as directed by the Engineer-in-charge. b) Providing and fixing asbestos free frame work of treated hard wood of selected species for stiles and rails and the core made of 27mm thick solid core of wood: c) Providing and fixing face panel of 6mm thick calcium silicate boards of required density, well matched 3 mm commercial ply veneering with vertical grains or cross bands on both faces of shutters, intumescent strips of required size as per the manufacturer's specifications fixed in grooves in the external lipping of 2nd class teak wood of the door shutter all around of required size, minimum one-hour fire rated stainless steel ball bearing hinged 100mm x 75mm x 3mm (4 hinges per leaf of shutter)				
	The cost includes providing opening of vision panel of required size in shutter (cost of glass excluded), pasting of laminates (Cost of laminates excluded) as per approved make and fixing vision panels of specified size with complete fire rated gasket channel & moulding beading and filling the gap between moulding/ beading and glass with suitable sealant. The cost also include for making provision of "L shaped" profile of door to fit in the existing GI door frame. (For the purpose of payment, the area shall be measured from outer face of finished door)	Sqm.	2550	8,662.87	2,20,90,311.27
5.9	Supply of vision panel in fire rated doors of specified sizes made out of minimum 5 mm thick clear fire rated glass (imported) for 120 minutes fire rating of Firelite (Japan)/ Asahi (Japan) / Schott from (Germany) fully transparent in fire/non-fire conditions having minimum 93% transparency, in accordance with IS : 3614 Part -II and BS : 476 Part 20& 22 , for 120min. fire rating for stability and integrity and insulation criteria .	Sqm.	8	19,379.00	1,55,032.00
5.10	Providing and fixing Stainless steel 304 grade satin finish D' type handle of approved make 19 mm dia (minimum) & 300 mm long, 1.2mm tube thickness (minimum) back to back (in pair) with rose , with adjustable fixing for wood and metal door with required brass bush insert, necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per direction of Engineer-in-Charge.	No.	948	783.00	7,42,284.00

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
5.11	Providing and fixing Stainless steel 304 grade satin finish D' type handle of approved make 19 mm dia (minimum) & 300 mm long, 1.2mm tube thickness (minimum) single side , with adjustable fixing for wood and metal door with required brass bush insert, necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per direction of Engineer-in-Charge.	No.	152	498.00	75,696.00
5.12	Providing and fixing Stainless steel 304 grade satin finish D' type handle of approved make 25 mm dia (minimum) & 450 mm long, 1.2mm tube thickness (minimum) back to back (in pair) with rose , with adjustable fixing for wood and metal door with required brass bush insert, necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per direction of Engineer-in-Charge.	No.	30	1,403.00	42,090.00
5.13	Providing and fixing Stainless steel 304 grade satin finish solid knob of approved make 50 mm dia (minimum) back to back (in pair) , necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per direction of Engineer-in-Charge.	No.	314	545.00	1,71,130.00
5.14	Providing and fixing stainless steel 304 grade satin finish aldrop of approved make, 250 mm long rod of 16mm (minimum) diameter, locking patti thickness 2mm (minimum) with required staples and additional one staple of minimum 2mm thickness along with necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per the direction of the Engineer - In - Charge.	No.	1108	791.00	8,76,428.00
5.15	Providing and fixing stainless steel 304 grade 100mm long baby latch along with indicator of approved make along with necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per the direction of the Engineer - In - Charge.	No.	356	454.00	1,61,624.00
5.16	Providing and fixing stainless steel 304 grade satin finish square tower bolt of approved make 300mm long, 10mm width along with necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per the direction of the Engineer - In - Charge.	No.	1108	414.00	4,58,712.00
5.17	Providing and fixing Dead Lock from approved make of 50 mm (minimum) back set, with cylinder type one side key and knob on other side, front and strike plate of stainless steel 304 grade, bolt, cylindrical lock & keys (3 set) of brass material along with necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per the direction of the Engineer v- In - Charge.	No.	130	963.00	1,25,190.00

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
5.18	Providing and fixing mortice Lock with thumb turn cylinder with level handle of approved make with one side key and thumb turn on other side cylinder of 50mm (minimum) back set. Lockpatti and strike plate shall be in stainless steel 304 grade. Keys (3 No), Latch, bolt and follower shall be in brass. 'L' shape Lever handle shall be stainless steel 304 grade of 22mm dia, 160mm (minimum) length with 1.2mm tube thickness. One pair of keyhole shall be of stainless steel 304 grade, 50mm (minimum) diameter with cover to concele screw complete as per the direction of the Engineer - In - Charge. Rates are inclusive of all necessary SS screws, washer, nut, bolts and any other incidental fitting/ attachment required for functioning of hardware.	No.	12	1,804.00	21,648.00
5.19	Providing and fixing door stopper as magnet catcher and ball catch with 100mm length with cover to conceal screws fixed to the door shutter and wall respectively of approved make along with necessary SS screws, bolts, nuts, washers etc. as per approved samples complete as per the direction of the Engineer- In - Charge.	No.	630	337.00	2,12,310.00
5.20	Providing and fixing Panic bar / latch (Double point) fitted with a single body, Trim Latch & Lock on back side of the Panic Latch of reputed brand and manufacture to be approved by the Engineer- in-charge, all complete.	No.	80.00	7,041.26	5,63,301.18
5.21	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.				
5.21.1	With stainless steel cover plate minimum 1.25 mm thickness	No.	4	3,414.00	13,656.00
5.22	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), with double speed adjustment with necessary accessories and screws etc. complete.	No.	80	843.76	67,500.92
5.23	Providing and fixing in position 12 mm thick fully glazed clear toughened glass with butt jointed glass panels (on vertical edges) for linear as well as curvilinear portions (with straight glasses), for all heights and all levels etc. all complete as per the architectural drawings, as specified and as directed by the Engineer-in-Charge.				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
5.23.1	Glass fixed at top and bottom using 38mm anodized Aluminium profile channel (twin pro section) for glazing with snap fitting arrangement (modular) with rubber gasket etc. all complete as per approved drawings. The rate is inclusive of glass, Aluminium profile channel, anchor fasteners, screws, nuts, bolts, any other hardware, silicone sealant or any other enabling work required to complete the item for which nothing extra shall be paid. For the purpose of payment, the actual area of the 12 mm glass provided and fixed in position will be measured (including the area of grooves).	Sqm.	66.00	3,191.40	2,10,632.50
5.24	Providing and fixing Ply / MDF in partition / wall lining / ceiling/ledges/counters/pelmets/shutters/shelves/frames etc. cut to required sizes and shapes and fixing to Steel tube / aluminium or any other frame work for partition/ wall panelling / counter using drive all, countersunk stainless steel screws (grade 304) on studs, members of the frame work of the partition, floors and ceiling channels at a spacing not more than 300 mm centre to centre, etc. all complete				
	The cost of providing and fixing frame work shall be paid separately under relevant item. For the purpose of payment, area of the plywood provided and fixed to the frame work shall be measured.				
5.24.1	9 mm thick BWR grade plywood conforming to IS :	Sqm.	10.00	1,075.00	10,750.00
5.24.2	12 mm thick BWR grade plywood conforming to IS :	Sqm.	27	1,230.00	33,210.00
5.25	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) in frame work for wall panelling/ ceiling/portals/partitions/etc. with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS: 1285. Aluminium frame work shall be made with hollow aluminium tubes placed along the walls or specified location in a grid pattern with specified spacing both ways (Vertically & horizontally) with necessary aluminium cleat angles at all junctions and fixing frame work to wall by drilling holes at spacing not more than 300 mm c/c fixed with rawl plug and SS screws complete as per architectural drawing and direction of Engineer-In- Charge for all heights and all leads complete.	Kg.	100	365.03	36,502.56
5.26	Providing and fixing 600x900 mm beveled edge mirror of superior glass (of approved quality) complete with 12 mm thick commercial plywood ground fixed to wooden cleats with C.P. brass screws and washers complete.	Sqm.	114	1,721.00	1,96,194.00
5.27	Providing and fixing 25mm thick pre-laminated medium density fibre board exterior grade (Grade-I) IS:14587:1998 marked with one side decorative and other side balancing lamination for cupboard shutters edges to be sealed with PVC edge bending tape 2.00 mm thick of approved brand including ISI marked nickel plated bright finishing M.S. piano hinges conforming to IS:3818 marked with necessary screw etc all complete	Sqm.	269	2,475.56	6,65,926.54

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
5.28	Providing and fixing IS : 12817 marked Stainless steel butt hinges (heavy weight) 125x64x2.5 mm IS : 12817 marked with stainless steel screws etc. all complete as per the architectural drawings, as specified and as directed by the Engineer-in-Charge.	No	210	69.86	14,670.98
	Total for Woodwork				3,49,30,421.92
F	STEEL WORK				
6.1	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.	Kg	20,000	110.31	22,06,214.99
6.2	Providing & fixing pressed steel door frames of following profile fabricated out of 1.25mm. thick G.I sheet of coating (class VIII of zinc coating) 120 gram/ sqm, manufactured by Sail/Lloyds/Jindal or equivalent of profiles / size generally conforming to IS 4351-2003 with suitable one/two set rebates for fixing shutters and also rebate suitable for fixing fixed glazing including hole for self tapping screws wherever shown in the drawing, each frame to contain hinge jamb, lock jamb and head all rigidly fixed together with welded / mechanical joints with back plates / angles to correct shape & angles including providing and fixing base ties with GI channel 50x25mm 1.25mm. thick suitable section to suit floor thickness / angle thresholds with MS angle 25x25x3mm.6 nos. of adjustable lugs per frame, providing and welding of 40x40x5mm, 150mm long angle cleats for hinges with necessary tapped holes for fixing countersunk headed machine screws to suit heavy duty oxidised/ stainless steel hinges of size 125 x 45 x 10G/ 125 x 38x 10 G/ 125 x 30 mm x 10 G/ 75 mm x 19mm x 15G or welding the hinges / piano hinges etc. and finishing the same to smooth etc. Providing and fixing IS 12817 marked stainless steel butt hinges (fire rated) 100mmx 75mm x 3mm with stainless steel screws etc, complete				
	including providing each door frame with necessary lock, strike plates, mortar guards, buffers,bushes etc. required for tower bolt/ baby latches, tadis, safety chains, aldrops etc. including fixing the frame to brickwork/ concrete work with necessary PCC or bolted / screwed to concrete work, painting a shop coating of polyuthrane paint including etching the surface with ETCH primer etc. including painting the exposed surfaces with two coats of anti corrosive bituminous paint, after rectifying the damaged PU primer due to transport including filling the hollows of door frame with C.C 1:2:4 using 12 mm thcik down graded stone aggregate etc,. all complete as per drawings, specifications and a s directed by the Engineer-in-charge.				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	Note: the quoted rate shall include cost of base tie/ angle and all accessories mentioned in the item description except iron mongeries (i.e., fittings and fixtures with wood and machine/ self taped screws as required which shall be measured and paid separately under relevant item.)				
6.2.1	Profile C size 120mm x 70mm	Rmt.	6,000	1,227.53	73,65,190.71
6.3	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.				
6.3.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	Kg	18,600	140.22	26,08,023.99
6.4	Extra for providing hot dipped galvanising on MS frame / bracket etc. by dipping in bath of molten zinc (zinc conforming to grade Zn98 of 209 / 1966) including preparation of metal surface for receiving galvanising such as pickling, rinsing, pre-fluxing etc., as per IS: 2629 - 1966. The mass of the zinc coating to be not less than 275 gm. per sqm of steel area to be galvanised. (Payment shall be made on the basis of actual weight of the galvanised work.)	Kg	6,000	28.00	1,68,000.00
6.5	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.				
6.5.1	Fixed to openings /wooden frames with rawl plugs screws etc.	Kg	70400	194.81	1,37,14,281.72
6.6	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.).	Kg	16,600	603.29	1,00,14,531.11
6.7	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	Nos.	1129	182.49	2,06,029.15

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
6.8	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 mm dia polyamide PA6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in-charge				
6.8.1	Size 10 x 120 mm	Nos.	250	142.48	35,620.67
	Total for Steel Work				3,62,82,271.67
G	FLOORING & WALL LINING WORKS				
7.1	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) :				
7.1.1	25 mm thick, size not less than 550 x 550 mm	Sqm.	2330	1,681.61	39,18,153.09
7.2	Kota stone slab flooring in treads of steps 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, making 3 nos. grooves 6mm x 3mm complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
7.2.1	25 mm thick, using single piece of minimum 2.1 m length	Sqm.	720	1,717.43	12,36,548.52
7.3	Kota stone slabs 20 mm thick in 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.	Sqm.	116	2,008.70	2,33,009.21
7.4	Kota stone slabs 20 mm thick in risers of steps (using single piece of minimum 2.1 m length) 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.	Sqm.	375	2,044.52	7,66,694.20
7.5	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	Rmt	2520	155.05	3,90,715.85
7.6	Providing and laying flamed finish Granite stone flooring, ramps, treads of steps 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 :				
7.6.1	Flamed finish 'Steel Grey' granite stone	Sqm.	162.00	2,551.98	4,13,420.25

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
7.7	Providing and fixing machine cut, 18 mm thick pre-polished 'Chikoo Brown' granite stone for wall lining, dado, skirting, risers of steps, columns etc. of required design and pattern, on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with cement slurry @ 3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. wherever required all complete as specified, as per Architectural drawings and as directed by the Engineer-in-Charge.				
7.7.1	Granite stone slab of all colour and texture except black, Cherry/ Ruby red	Sqm.	1220	3,503.39	42,74,134.10
7.8	Providing and fixing 4 mm thick (minimum) heterogeneous vinyl sports flooring including skirting , in required colour, profile and pattern of specified approved make of required size as per the site conditions, etc. all complete. The flooring to be fixed and jointed by using approved adhesive as per manufacturer's specifications and as per direction of Engineer-in-Charge. All visible joints on flooring shall be sealed as per the manufacture's specifications to make the floor seamless. The floor shall be dried and leveled with self leveling material, before fixing vinyl flooring for which nothing extra shall be paid.	Sqm.	111	3,255.00	3,61,305.00
7.9	Crazy ceramic tile flooring, with under layer 12 mm thick cement mortar 1:4 (1 cement: 4 coarse sand), with joints not exceeding 5 mm, including filling the gaps with ordinary cement mixture & mixing with synthetic polyester fibre, triangular in shape having specific gravity of 1.34 to 1.40, cross section size ranging from 10 to 40 micron & length upto 6 mm , mixing fibre @ 125 grams per 50 kg of cement in cement mortar, including providing and mixing water proofing material in mortar @ 1 kg per 50 kg of cement, all complete as per direction of Engineer-in-charge.	Sqm.	4400	803.51	35,35,442.28
7.10	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.				
7.11	Glazed vitrified tiles of nominal size 600mmx600mm Matt / glossy finished in dark/ light shades or in combination in required pattern as per architectural drawings and as per direction of Engineer-in-charge.	Sqm.	21800	1,395.91	3,04,30,759.92

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
7.12	Providing and laying Vitrified 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 brand & manufacturer, in all colours and shade, in skirting, riser of steps , laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints				
7.12.1	Glazed vitrified tiles of nominal size 600mmx600mm Matt / glossy finished in dark/ light shades or in combination in required pattern as per architectural drawings and as per direction of Engineer-in-charge.	Sqm.	1365	1,445.03	19,72,461.14
7.13	Providing and fixing 1st quality ceramic glazed wall tiles of size 300 mm x600 mm conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black 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.	Sqm.	10300	1,047.88	1,07,93,145.67
7.14	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, door jambs, soffits, 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				
7.14.1	Granite stone slab, Chikoo Brown				
7.14.1.1	Area of slab upto 0.50 sqm	Sqm.	2550	3,503.39	89,33,640.96
7.14.1.2	Area of slab over 0.50 sqm	Sqm.	100	3,253.11	3,25,310.79
7.15	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.				
7.15.1	Chikoo Brown Granite Stone	Sqm.	26	3,490.97	90,765.30

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
7.16	Providing and fixing machine cut, one side polished, 30 mm thick Cuddappah Stone slab , for kitchen and wash basin platform bases and similar locations of required size, fixed over masonry / CC / RCC end support walls using cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry, pointing with cement slurry mixed with matching pigment, including rubbing, curing etc. all complete at all levels, as directed by the Engineer-in-Charge.	Sqm.	420	1,217.00	5,11,140.00
7.17	Providing, laying and fixing Pavit exterior grade fibrilling fibre reinforcement heavy duty designer cement concrete tiles for Flooring of approved colour and design 22 +/- 2 mm thick bayer colour pigmented as per IS ..1237 - 1980 having compressive strength more than 500 Kilogram/sq.cm reaffirmed in 2006 ,having wert transvrse strength of 3.5 / mm 2, water absorption less than 10 % abrasion / wear resistance less than 2 mm ,skid resistance more than 25.0 (ASTM:E303) and no fading as per DIN - 51094 of size 300 x 300 in plan / designed pattern on a bed of 1:4 cement mortar including cement float ,filling joints with neat cement slurry ,curing, polishing and cleaning etc. complete. For flooring curing etc. all complete at all levels, as directed by the Engineer-in-Charge.	Sqm.	666	1,078.00	7,17,948.00
7.18	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.	nos			
7.18.1	Glazed Vitrified tiles Matt/Antiskid finish of size 600mm x 600mm		605	1,291.85	7,81,570.88
7.19	Providing and laying composite marble flooring in required design and patterns in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 12mm thick stone labs over 20mm (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.				
7.19.1	Minta Finish composite marble	sqm	18	6,001.00	1,08,018.00

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
7.2	Providing and fixing machine cut 12 mm thick composite marble for wall lining, dado, skirting, risers of steps, columns, etc. of required design and pattern on 12mm (average) thick cement mortar 1:3(1 cement: 3 coarse sand) laid and jointed with white slurry @3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc wherever required all complete as specified as per Architectural drawings and as directed by the Engineer-in-charge.				
7.20.1	Minta Finish composite marble	sqm	500	6,001.00	30,00,500.00
7.21	Providing and fixing 12mm thick gang saw cut premoulded and prepolished machine cut for kitchen platforms, vanity counters, window sills, door jambs, soffits, facias and similar locations of required size, approved shade, colour and texture laid over 20mm 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.				
7.21.1	Minta Finish composite marble				
7.21.1.1	Area of slab upto 0.50 sqm	sqm	77	4,901.00	3,77,377.00
7.21.1.2	Area of slab over 0.50 sqm	sqm	20	5,192.00	1,03,840.00
	Total for Flooring				7,32,75,900.16
H	ROOFING				
8.1	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	Nos.	20	47.20	943.97
8.2	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm.	88	661.72	58,231.07
	Total for Roofing Work				59,175.04
J	FINISHING				
9.1	Providing and applying 18 mm thick (average) ready mixed cement plaster in CM 1:4 in two coats, inner layer 12mm thick and top layer 6mm thick finished rough with sponge complete as per manufacturer's specifications and direction of Engineer-in-charge.	Sqm.	18260	455.09	83,09,893.53

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
9.2	Providing and applying 12 mm thick (average) ready mixed cement plaster in CM 1:4, complete as per manufacturer's specifications and direction of Engineer-in-charge at all heights and levels.	Sqm.	11500	290.53	33,41,124.90
9.3	Providing and applying 6 mm thick (average) ready mixed cement plaster in CM 1:3, complete as per manufacturer's specifications and direction of Engineer-in-charge at all heights and levels.	Sqm.	5000	249.34	12,46,723.32
9.4	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete	Sqm.	40000	122.04	48,81,460.06
9.5	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls and similar locations etc. at all floors and locations, finished in smooth line and level etc. complete.	Sqm.	38000	358.13	1,36,08,868.20
9.6	Neat cement punning.	Sqm.	220	66.81	14,697.59
9.7	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.				
9.7.1	Height above 10 m up to 13 m	Sqm.	1335	71.73	95,764.91
9.7.2	Height above 13 m up to 16 m	Sqm.	1335	143.47	1,91,529.81
9.7.3	Height above 16 m up to 19 m	Sqm.	1335	215.20	2,87,294.72
9.7.4	Height above 19 m up to 22 m	Sqm.	1335	286.94	3,83,059.62
9.7.5	Height above 22 m up to 25 m	Sqm.	1335	358.67	4,78,824.53
9.7.6	Height above 25 m up to 28 m	Sqm.	1335	430.40	5,74,589.43
9.7.7	Height above 28 m up to 31 m	Sqm.	1335	502.14	6,70,354.34
9.7.8	Height above 31 m up to 34 m	Sqm.	1946	573.87	11,16,755.09
9.8	Finishing walls / ceilings with anti-fungal, Premium 100% Acrylic Smooth exterior paint with Silicone additives of "Apolite Apex 100% Acrylic Exterior Paint" of Asian Paints or "Dulux Weathershield" of ICI India Limited or equivalent to give an even shade, in required colours and shades as approved by the Engineer-in-Charge:				
9.8.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior acrylic primer applied @ 0.8 litre/ 10 sqm)	Sqm.	18200	159.97	29,11,504.19
9.9	Providing & applying in desired finish in two or more coats, on exterior surface at all heights and levels acrylic texture plaster 'Apex Duracast Roughtex' of Asian paints or equivalent as given in list of approved make, overall thickness up to 1.5mm applied @ 3.08kg per sqm. As per manufacture's specification and direction of Engineer-in-Charge :	Sqm.	17500	241.41	42,24,719.42

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
9.10	Applying one coat of cement primer of approved brand and manufacture on wall surface including surface preparation as specified:				
9.10.1	Water thinnable Cement primer of "Deco prime Cement Primer" of Asian Paints or "Dulux Cement Primer" of ICI India Limited.	Sqm.	68000	63.51	43,18,426.90
9.11	Finishing walls / ceilings with premium acrylic emulsion paint of "Apcolite Super Acrylic emulsion paint" of Asian Paints or "Dulux Acrylic Emulsion" of ICI Dulux for interior works to give even shade, in required colours and shades as approved by the Engineer-in-Charge :	Sqm.	53000	135.83	71,99,069.70
9.11.1	Two or more coats on new work .				
9.12	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :	Sqm.	3761	129.53	4,87,144.34
9.12.1	Two or more coats on new work				
	Total for Finishing				5,43,41,804.58
K	ROAD WORK				
10.1	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm.	900	937.07	8,43,367.31
10.2	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 coarse 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.				
10.2.1	80mm thick Cement concrete paver block of M-30 grade with approved colour, design & pattern.	Sqm.	1980	996.39	19,72,858.74
10.3	Providing and laying R.C.C.NP2 class Hume pipes with jointing and filleting etc. complete as specified and as directed (All the pipes supplied shall confirm to relevant IS). The contractor shall also arrange to get the pipes tested in accordance with tests specified in relevant IS codes at contractor's cost and as directed. Laying of pipes shall be carried out as per relevant IS, including all leads and lifts etc. complete as directed by Engineer-in-charge.				
	NP2 Class				
10.3.1	a)150 mm dia	Rmt.	200	485.88	97,175.94
10.3.2	b)250 mm dia	Rmt.	100	799.27	79,927.26
10.3.3	c)300 mm dia	Rmt.	50	888.84	44,442.08

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
10.4	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	47	8,487.42	3,98,908.95
10.5	Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centering, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100mm c/c on both ways, neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick, 100 mm wide MS sheet duly painted over priming coat, reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc i/c cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.	Sqm	50	2,578.83	1,28,941.39
Total for Road Work					35,65,621.66
L	ALUMINIUM WORK				
11.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
11.1.1	For fixed portion				
11.1.1.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	Kg	17,000	427.60	72,69,128.60
11.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/pivots/rollers and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				
11.1.2.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	Kg	11,000	524.01	57,64,143.13

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
11.2	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):				
11.2.1.1	With 6.0 mm thick toughened glass panes with SHGC value between 0.50 - 0.52, VLT between 50 - 60%, U-value between 3.7 - 5.0	Sqm.	1,200	2,206.00	26,47,200.00
11.2.1.3	With 6.0 mm thick frosted glass panes	Sqm.	89	1,024.00	91,136.00
11.3	Providing & fixing fly proof wire gauze to windows, clerestory windows & doors in anodized Aluminium frame with necessary S.S screws etc. complete as per the architectural drawings and the directions of Engineer-in-charge.				
11.3.1	Stainless steel (grade 304) wire gauze of 0.5 mm dia wire and 1.4 mm aperture on both sides	Sqm.	908	896.00	8,13,568.00
11.4	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) The weight of aluminium extruded section shall be taken for purpose of payment.				
11.4.1	For the purpose of payment, the actual weight of the PVDF coated aluminium sections provided and fixed in position, shall be measured in kg up to two decimal places.	Kg	14150	365.03	51,65,112.40
11.4.2	Providing and fixing lock Nib and counterplate assembly for aluminium sliding shutter including SS screws of size 32x 6 mm etc. as per direction of Engineer-in-charge.	Nos	2550	457.00	11,65,350.00
11.5	Providing and erecting 4.00 metre high temporary barricading at site; each panel of size 2.50mx4.00m made of 40x40x6mm angle iron or 50x50x3mm hollow MS tube posts/horizontal members/bracings covered with Precoated galvanised iron profile sheet 0.50 mm TCT. The sheet shall be fixed with 30x5mm MS flat by suitable welding/riveting. MS channel ISLC 75 @ 5.70 kg/m, 50cm long shall be provided at the bottom having oval shaped holes of size 50x25mm at both ends with 15cm long MS angle 40x40x6mm bracing. Suitable arrangement shall be made to fix the barricading to avoid from overturning by providing 250mm long expansion fasteners at both ends.	metre	500	1,430.74	7,15,370.45

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	The work shall be executed which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed. The barricading provided shall be retained in position at site continuously i/e shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate includes its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Dean IPS.				
	(Note:-One time payment shall be made for providing barricading from start of work till completion of work i/e shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).				
	Total for Aluminium Work				2,29,15,638.14
M	WATER PROOFING				
12.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : (i) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. (ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. (iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cum/sqm thoroughly embedded in the 2nd layer.				
12.1.1	Using Shahbad Stone	Sqm.	440	1,342.99	5,90,916.80
12.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :				
12.2.1	Using Shahbad Stone	Sqm.	464	1,754.23	8,13,963.46

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
12.3	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 Engineerin-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 Engineerin-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface. (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 :				
12.3.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	Sqm.	5,466	1,500.65	82,02,552.35
12.3.2	With average thickness of 65 mm on horizontal surfaces and treatment extended to vertical surfaces of depressed / sunk portions of toilet, kitchen and the like	Sqm.	2,400	1,159.00	27,81,600.00

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
12.4	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.				
12.4.1	For vertical surface two coats @0.70 kg per sqm per coat	Sqm.	1,224	400.30	4,89,968.92
12.4.2	For horizontal surface one coat @1.10 kg per sqm.	Sqm.	461	306.94	1,41,498.79
	Total for Waterproofing Work				1,30,20,500.32
N	STRUCTURAL GLAZING ALUMINIUM				
	COMPOSITE PANEL				
13.1	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).	Kg.	16,030	365.03	58,51,360.55

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
13.2	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: (a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must pass 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:				
	(b) (b) 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 Dimensional 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 separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.				
	(c) (c) 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.				
	(d) 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.				
	(e) 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, duly approved by Engineer-in- charge.				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	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 characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer- in-Charge.				
	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.	Sqm.	1,500	3,065.79	45,98,687.15
13.3	Providing and supplying Vision Glass Panels comprising of 8 mm thick heat strengthened monolithic float glass of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade ,all complete for the required performances as specified, as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in-Charge."For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (Payment for fixing of Vision Glass Panels in the curtain glazing is included in cost of relevent Item*). (i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, having properties as visible Light transmittance (VLT) of 50 to 60 %, U value of 3.7 to 5.0 W/m2 K, SHGC value of 0.4 to 0.5 etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	Sqm.	282.88	2,514.00	7,11,160.32
13.4	Providing and supplying Vision Glass Panels comprising of 8 mm thick heat strengthened monolithic float glass (without SHGC value), all complete as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in-Charge."For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (Payment for fixing of Vision Glass Panels in the curtain glazing is included in cost of relevent Item).	Sqm.	1014	1,713.00	17,36,982.00

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
13.5	Extra for openable side / top hung vision glass panels 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.	Sqm.	67	3,260.60	2,16,960.10
13.6	Designing, fabricating, testing, installing and fixing in position Curtain Wall, canopy etc. with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. including:				
	(a) Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design.				
	(b) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.				
	(c) The item includes cost of all material & labour component, 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 curtain wall / canopy with aluminium composite panel cladding, cleaning and protection of the curtain wall / canopy with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium item. The Contractor shall provide curtain wall / canopy with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall, canopy with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two deG/ 125 x 38x 1	Sqm.	864	3,302.00	28,52,928.00
	Total for ACP Works				1,59,68,078.12

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
P	MISCELLANEOUS WORKS				
14.1	Providing and fixing bird mesh of approved make made up of high density polyethylene (HDPE). Each strand should have knotted breaking strength. It should be flame, rot and uv resistant. All pieces are seamless and borderless for clean edges and easy perimeter fastening, available in 3/4" : 19mm x 19mm square mesh and should be installed with all types of netting hardware systems and directed by in engineer in charge	Sqm.	753	368.00	2,77,104.00
14.2	Core Cutting in RCC walls/beams/slabs by mechanical cutter of specified diameter through walls/beams/slabs complete including removing malba etc. making good the holes after insertion of pipe by filling the gap with concrete M-35 with admixture/plasticizers as per direction of Engineer-in-charge.				
14.2.1	100mm dia.	Per CM	14270	50.00	7,13,500.00
14.2.2	150mm dia	Per CM	1120	74.00	82,880.00
14.3	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.				
	Made of G.I. wire of dia 4 mm	Sqm.	300	846.91	2,54,074.38
14.4	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	Rmt.	300	299.20	89,761.12
14.5	Providing and laying S&S centrifugally cast (spun) ductile iron pipes conforming to IS:8329				
14.5.1	150 mm dia Ductile iron class K-9 pipes	meter	133	1,601.25	2,12,966.90
14.6	Providing push on joints to centrifugally spun cast iron pipes or ductile iron pipes including testing of joints and the cost of rubber gasket				
14.6.1	150mm dia pipes	per joint	24	153.77	3,690.36
14.7	Extra for pre finished nosing to treads of steps of Granite stones	meter	142	604.12	85,785.18

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
14.8	Providing and fixing 65 mm dia round shaped 6 liver pad lock of on door as approved by Engineer-in-charge	nos	330	198.33	65,450.24
14.9	Providing and fixing stainless steel 304 grade satin finish Kadi tala of approved make 275mm long with adjustable fixing for wood and metal door with required brass bush insert necessary SS screws, bolts, nuts, washers,etc as per approved sample (DORSET-KDT-275N) complete as per direction of Engineer-in-charge	nos	134	672.51	90,116.62
14.10	Providing and fixing 150mm SS 304 matt finish Cockroach trap with hole or without hole as per approved make and samle all complete	nos	570	740.90	4,22,314.77
14.11	Providing and fixing single point handle made of zinc alloyed (Black powder coated) for casement window with necessary screws etc complete	nos	200	170.98	34,195.53
14.12	Providing and fixing Stainless steel (SS 304 grade) friction hinges to the side/top hung aluminium windows of approved quality with necessary stainless steel screws etc. as per direction of Engineer in charge	nos	170	341.96	58,132.40
14.13	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc complete (New work):				
14.13.1	15mm dia nominal bore	each	65	258.46	16,799.85
14.13.2	20mm dia nominal bore	each	58	284.82	16,519.42
14.13.3	25mm dia nominal bore	each	310	363.94	1,12,821.93
14.13.4	32mm dia nominal bore	each	8	403.45	3,227.64
14.13.5	50mm dia nominal bore	each	31	696.35	21,586.91
14.13.6	65mm dia nominal bore	each	16	979.79	15,676.64
14.13.7	80mm dia nominal bore	each	22	1,045.71	23,005.63
	Total for Misc. Works				25,99,609.52
	Total for Civil component				68,10,95,667.11
II	SITE DEVELOPMENT WORKS				
Q	External Area Works				
15.1	Providing and laying 230mm thick Brick masonry in site development with locations as per drawing and in internal drain. walls to be in correct line, level and plumb including raking out joints, curing, scaffolding etc. complete as per specifications, drawings & as directed by Engineer-in-charge.	Cum	10	8,166.99	81,669.86
15.2	Providing and fixing random rubble masonry with hard stone in external work including levelling up with cement concrete M 10 upto required level with cement mortar 1:6 to correct line, level and plumb including raking out joints/simultaneous flush pointing with cement mortar 1:4, curing etc.complete as per specifications, drawings and as directed by Engineer-in-charge.	Cum	10	8,154.52	81,545.21

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	TOTAL OF External Area Works				1,63,215.08
R	HORTICULTURE WORKS				
16.1	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.				
16.1.1	Beyond 60 cm girth upto and including 120 cm girth	No.	100	1,928.49	1,92,849.20
16.1.2	Beyond 120 cm girth upto and including 240 cm girth	No.	26	8,951.03	2,32,726.91
16.2	Transplanting trees present on site, of all girth sizes including trimming, removing carefully, transporting and transplanting within the premises of IIT Bombay. The rate shall include the cost of any machineries required for shifting the trees and maintenance of transplanted trees like making of basin at regular interval i/c watering, weeding, etc. as per direction of officer in charge. <u>Note:</u> The rate shall include deployment of labour to take care of these transplanted trees throughout the execution of the project till handing over.				
16.2.1	Girth of trees beyond 90cm and upto 150cm	No.	43	10,022.71	4,30,976.51
16.2.2	Girth of trees beyond 150cm	No.	20	22,308.19	4,46,163.87
	Total for Horticulture Works				13,02,716.50
II	TOTAL OF SITE DEVELOPMENT WORKS				14,65,931.57
PART - III	PLUMBING, FIRE FIGHTING WORK				
A	SANITARY WARES AND CP APPURTENANCES				
	GENERAL NOTES:				
	1) Tenderers are advised to visit the site of work to acquaint themselves about the levels of sub soil water, drainage facility for dewatering, accessibility to site etc. and quote the rates accordingly.				
	2) All sanitary wares & CP brass fittings & fixtures shall be of first quality with ISI mark (unless otherwise specified) and shall be of the make as per the latest approved list of materials as per list of approve make / model as per APPENDIX "A" and should be of low flow type as per GRIHA requirements . They shall be got approved by the Engineer- in- charge before incorporating in the work.				
	3). All the items of work which are to be carried out below the ground level involving earthwork excavation, the contractor shall bear the cost of Shoring / dewatering during the progress and till the completion of work irrelevant of the mentioning of the same in the description of particular item of the schedule of quantities.				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	4) The rate for the items such as sanitary wares, CP brass fittings, GI / UPVC pipes which are to be fixed on the walls / dado, floors etc. includes the cost of fixing materials and matching colour cement required for reinstating the surface to the entire satisfaction of the Engineer-in-Charge				
	5) All the items include testing after completion of the work.				
	6) Concealed / underground GI pipe line is to be wrapped with hessian cloth and painted with two coats of anticorrosive paint.				
	7) The excavated / transported materials shall be stacked at convenient places before spreading, filling & compacting at required locations.				
1.0	Supplying, Installing, testing and commissioning I) Providing Vitreous China wall hung type wash down pattern Water Closet (EWC) conforming to IS 2556 (part XVI) with integral "P" trap outlet with water seal not less than 50 mm with vent and necessary C.I. brackets supports. with 100 mm P or S trap, Inlet Connection Pipe 32 mm dia Pipe of required length from flushing cistern to Water Closet concealed in the wall making connection with W.C pan and cistern including the cost of uPVC fittings, fixtures and jointing materials n, including flush pipe, with manually controlled device (handle lever) with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required Testing the system to the full satisfaction of the Engineer-in-Charge.				
	Recommended manufacturers are :-1)Parryware 2)Hindware 3)Jaquar				
1.1	i) Providing & fixing Vitreous China European Water Closet of pure china white as per approved sample by Eng-in-charge with P trap. (Make : Parryware, Model No : Indus C0255 Closet (490x355x380) with Normal Seat No. Cover; Hindware-Model No.:Mario-CAT No.-20082;Jaquar-Model No.-CNS-WHT-959SPP) or with prior approval of Engineer-in-Charge.	No.	89	7,584.68	6,75,036.71
	ii) Providing & fixing Flushing Cistern including inlet / outlet connections, G.I. fittings fixtures, cutting hole, testing etc. (Make : Commander / Jaquar, Dual flush Egret;Hindware-Sleek essential dual flush 3/6 litre SD)				
1.2	i) Providing & fixing Vitreous China European Water Closet For Physically Handicap of pure china white as per approved sample by Eng-in-charge with P trap. (Make : Parryware, Model No : Conventina C0250 Carron Soft Closet 455x360x470 with E0894 Solid Soft Closer Seat Cover; Hindware-Model No.:Mario-CAT No.-20082;Jaquar-Model No.-CNS-WHT-WS04) or with prior approval of Engineer-in-Charge.	No.	42	7,584.68	3,18,556.65

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	ii) Providing & fixing Flushing Cistern including inlet / outlet connections, G.I. fittings fixtures, cutting hole, testing etc. (Make : Commander / Jaquar, Dual flush Egret;Hindware-Sleek essential dual flush 3/6 litre SD)				
1.3	i) Providing & fixing Vitreous China Indian Water Closet of pure china white as per approved sample by Eng-in-charge with P trap. (Make : Parryware, Model No : Orisa - C0111 - 500x405x255,Hindware-Model No.:Mario-Asian pan - CAT NO-20018;Jaquar-Model No. ECS-WHT-451) or with prior approval of Engineer-in-Charge.	No.	66	3,077.60	2,03,121.44
	ii) Providing & fixing Flushing Cistern including inlet / outlet connections, G.I. fittings fixtures, cutting hole, testing etc. (Make : Commander / Jaquar, Dual flush Egret;Hindware-Sleek essential dual flush 3/6 litre SD)				
1.4	Providing & fixing Health Faucet (Hand shower) with PVC / flexible tube with check nuts, wall hook etc. of following type & fixing using white Zinc, spun yarn etc. and wall hook on the wall at the appropriate location using 40 mm long CP brass screws, rawl plug etc. including testing the joints for leak proofness all complete. (Make : Jaquar, Model No : ALD - CHR - 565 GB Crome, 1.0 mtr long Tube in Crome Finish & Wall Hook;Hindware - F160068-(with dynamic flow restrictor) or on prior approval of Engineer-in-Charge.	No.	189	884.27	1,67,127.70
1.5	Providing & fixing Stainless steel recessed type Toilet paper Roll Holder . (Make : Jaquar, Model No : Toilet paper Roll Holder with Flap - ACN - 1153N;Parryware-T6414A1;Hindware-F840009) or with prior approval of Engineer-in-Charge.	No.	189	1,183.78	2,23,734.57
1.6	Providing & fixing C.P. brass robe hook (Make : Jaquar, Model No : ACN - 1191N;Hindware - F840007;Parryware - T6406A1) or with prior approval of Engineer-in-Charge.	No.	189	396.62	74,961.66
1.7	Providing & fixing C.P brass two way Bib tap -15mm with wall flange. (Make : Jaquar, Model No : CQT - CHR - 23041 GB;Hindware-F200004 ACP)or with prior approval of Engineer-in-Charge.	No.	189	1,284.49	2,42,767.97
1.8	Providing & Fixing Heavy duty P.V.C. WC connector (straight or bend type) with rubber lip ring. Including 110 mm dia PVC pipe / bend of required length and proper connection complete	No.	189	313.44	59,239.44

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
2.0	Supplying, Installing, testing and commissioning Wash hand basin with one tap holes and chain stay hole, pedestal, 32mm diameter chrome plated chain waste, chrome plated non-conculsive time delay press action pillar tap , concealed wall brackets with screw,rawl plug and bottle trap (32mm 'P' trap)40 mm upvc pipe with 40mm seal. wherever required Testing the system to the full satisfaction of the E.I.C.				
2.1	i)Providing & Fixing White glazed Vitreous China Wash Hand Basin. (Make : Parryware, Model No : Niagara C0494 - 545x400x185mm;Hindware - ZEN CAT NO-10049;Jaquar-CNS-WHT-705)or with prior approval of Engineer-in-Charge.	No.	210	1,137.22	2,38,816.31
	ii) Providing & Fixing C.P brass waste coupling of 32 mm size, full threaded with grating. (Make : Jaquar, Model No : ALD - 709 - 32mm Size, 60 mm Height;Hindware - F80002;Parryware - T9911A14)or with prior approval of Engineer-in-Charge.				
	iii) Providing & Fixing C.P brass Pillar Cock 15 mm size having long neck with Aerator. (Make : Jaquar, Model No : Pressmatic - PRS - 031L65 GB with Auto Closing System with 65mm Extension Body)or equivalent with prior approval of Engineer-in-Charge.				
2.2	C.P brass Bottle Trap (with internal partition), 32 mm size and 300 mm long wall connection pipe with wall flange. (Make : Jaquar, Model No : ALD - 769L - 300 x 190;Hindware-F850004;Parryware - T3202A1) or with prior approval of Engineer-in-Charge.	No.	210	521.60	1,09,536.00
2.3	Providing, fixing of flexible water pipe with C.P. brass Concealed angle valve with C.P. wall flange, Nut and Washer etc. complete as required. (Make : Jaquar, Model No : Angular Stop Cock with Wall Flange, CQT-CHR-23059;Hindware - F200005) or with prior approval of Engineer-in-Charge.	No.	210	1,796.40	3,77,244.00
3.0	Supplying, Installing, testing,cutting, fixing and commissioning sink with single bowl manufactured from 1mm thick stainless steel, 18G high grade indestructable chrome nickel steel with top quality polish, 1no. 40mmdia CP waste coupling,with 1no. 40mm dia CP bottle trap with extension pipe,Single Lever Sink tap with. Swinging Spout etc., complete. wherever required Testing the system to the full satisfaction of the E.I.C.				
	Providing & Fixing Heavy duty stainless steel sink of Nirali Make				
3.1	a) Silent square - Nirali Omni Small - Overall size 460 mm x 460 mm and Bowl size 410 x 410 x 230 mm	No.	6	8,013.15	48,078.91

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
3.2	Providing & Fixing Sink taps with swinging casted spout (Wall Mounted) with connecting legs and flanges, as per (Make : Jaquar, Model No : CQT - CHR - 23347 GB) or equivalent with prior approval of Engineer-in-Charge.	No.	6	1,610.87	9,665.23
3.3	Providing & Fixing C.P brass waste coupling of 32 mm size, full threaded with grating, (Make : Jaquar, Model No : ALD - 709 - 32mm Size, 60 mm Height) or equivalent with prior approval of Engineer-in-Charge.	No.	6	457.34	2,744.06
3.4	Providing, fixing of flexible water pipe with C.P. brass Concealed angle valve with C.P. wall flange, Nut and Washer etc. complete as required. (Make : Jaquar, Model No : Angular Stop Cock with Wall Flange, Continental : 059KN) or equivalent with prior approval of Engineer-in-Charge.	No.	6	1,575.10	9,450.59
4.0	Providing & fixing, testing and commissioning of white vitreous china large flat back / half stall urinal SIZE : 270 x 360 x 440 including Push tap for flushing after use, providing & fixing CI / MS bracket (duly painted with 2 coats of paints over a coat of primer), including CP cast brass bottle trap, extension piece, wall flanges with urinal partition including providing & fixing concealed complete with all accessories. (Make For Urinal : Parryware, Model No : Flat Back C0501 - 270x360x440mm; Hindware - Flat Back Small CAT NO-60001; Jaquar-URS-WHT-13259) (Make For Push Tap for Urinal : Jaquar, Model No : Pressmatic PRS077 G Urinal Valve with Auto Closing system with 65 mm Extension Body; Hindware - F310003) or with prior approval of Engineer-in-Charge.	No.	137	11,336.96	15,53,163.17
5.0	Providing & fixing Concealed bath shower diverter with built in NRV & diverter handle, faucet, 115 mm long bend pipe, wall flanges and overhead shower single flow 120mm dia. (Make : Jaquar, Model No : OHS 1779 GB - 120 mm dia with Shower Arm SHA - 477 - 190 mm Long Wall Mounted & Wall Mixer; Hindware - 160054 (with dynamic flow restrictor) - Jaquar make, Model No : CQT - CHR - 23273UPR GB; Hindware - F200020) or with prior approval of Engineer-in-Charge.	No.	181	7,212.71	13,05,501.18
6.0	Providing & fixing Stainless steel Towel Rail 600 mm long with necessary S.S screws & fittings (Make : Jaquar, Model No : Continental - ACN 1111BNM ; Hindware - F840013; Parryware - T6001A1) or with prior approval of Engineer-in-Charge.	No.	111	1,440.25	1,59,867.25
7.0	Providing & fixing Liquid Soap Dispenser with mettalic Bottle with necessary fittings (Make : Jaquar, Model No : ACN 1137N) or equivalent with prior approval of Engineer-in-Charge.	No.	36	2,977.47	1,07,188.78

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
8.0	Providing & fixing of Hand Dryer. (Make : Jaquar, Model No : M99ACS - Optima) or equivalent with prior approval of Engineer-in-Charge.	No.	4	16,201.84	64,807.37
9.0	Providing & fixing of Paper Towel Dispenser. (Make : Jaquar, Model No : DT0106CZ) or equivalent with prior approval of Engineer-in-Charge.	No.	4	6,082.24	24,328.98
10.0	Providing & fixing C.P brass Angular Stop cock -15mm with wall flange for Drinking Water & Laundry Area (Make : Jaquar, Model No : CQT - CHR - 23053;Hindware - F20005) or with prior approval of Engineer-in-Charge.	No.	486	760.81	3,69,752.04
	TOTAL OF SECTION A				63,44,690.03
B	INTERNAL WATER SUPPLY SYSTEM				
	NOTE:				
	1.G.I. pipe shall be of Class C & ISI mark. 2.The rate shall inclusive of G.I. pipe line & fittings like bends,elbows,unions,Tee joints,couplings etc. required for making connections with the existing GI pipe line laid by other agency.				
1.0	Supplying, Installing, testing and commissioning on exposed surfaces as well as concealing the following dia. galvanised iron pipe of specified class consisting following items of work:-				
	i) Supplying galvanised mild steel screwed and socketed pipe conforming to IS 1239 (part-I) with galvanised mild steel or wrought steel fittings conforming to IS 1239 (part-II)				
	ii) Laying and fixing the pipe and specials on exposed surfaces to correct line, level and plumb for water supply line, overflow and vent using M.S. nails, rawl plugs, GI gutties and 'U' type G.I clamps having not less than 2 mm thick. the pipeline exposed as per the site requirement.				
	iii) Painting the surface mounted pipe line after testing with two coats of oil paint of approved make and shade over a coat of approved primer.				
	iv) Testing the pipe line to a hydraulic pressure of 10 Kg / Sq.cm for leak proof joint.				
	v) Making leak proof threaded joints using White zinc, Spun yarn etc. including cutting the pipe, threading and the cost of jointing materials.				
	vi) Cutting or making hole or chases in RCC or brick work structure such as wall, column, beam, slab, chajja, dado etc. for passing the pipe line and reinstating all the damage to its original condition proof joints.				
	vii) Exposed Hot water pipes to be insulated with elastomeric nitrile rubber / foam tube type sleeves				
1.1	15 mm n.b Concealed	Rmt.	766	478.10	3,66,125.43

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
1.2	20 mm n.b Concealed	Rmt.	943	533.18	5,02,519.17
1.3	25 mm n.b Concealed	Rmt.	910	667.24	6,07,190.62
1.4	32 mm n.b Concealed	Rmt.	212	744.23	1,57,971.32
1.5	15 mm n.b surface mounted	Rmt.	431	299.70	1,29,229.10
1.6	20 mm n.b surface mounted	Rmt.	137	367.88	50,510.36
1.7	25 mm n.b surface mounted	Rmt.	1067	484.01	5,16,334.37
1.8	32 mm n.b surface mounted	Rmt.	341	555.35	1,89,179.08
1.9	40 mm n.b surface mounted	Rmt.	60	714.53	42,729.00
1.10	50 mm n.b surface mounted	Rmt.	787	880.12	6,92,408.90
1.11	65 mm n.b surface mounted	Rmt.	450	1,122.18	5,04,982.46
1.12	80 mm n.b surface mounted	Rmt.	970	1,328.37	12,88,349.63
1.13	100 mm n.b surface mounted	Rmt.	254	3,030.25	7,69,077.42
2.0	Providing class I following diameter Gun Metal Gate Valve of approved make (full way) with Cast iron wheel conforming to IS 14846 fixing to pipe line including the cost of white zinc, spun yarn etc., testing for leak proof joints at a hydraulic pressure of 10 Kg / Sq.cm, rectifying the leakages if any, all complete as per specification of approved make .				
2.1	15 mm dia. Nominal bore	No.	23	413.91	9,520.04
2.2	20 mm dia. Nominal bore	No.	3	454.99	1,364.97
2.3	25 mm dia. Nominal bore	No.	124	524.55	65,044.81
2.4	32 mm dia. Nominal bore	No.	21	581.26	12,206.51
2.5	40 mm dia. Nominal bore	No.	2	696.94	1,393.89
2.6	50 mm dia. Nominal bore	No.	18	865.39	15,577.02
2.7	65 mm dia. Nominal bore	No.	10	1,468.87	14,688.72
2.8	80 mm dia. Nominal bore	No.	18	2,194.98	39,509.67
2.9	100 mm dia. Nominal bore	No.	2	6,681.28	13,362.56
3.0	Providing & fixing Auto Air vent for water supply risers / Loop, suitable for pressure not less than 15 Kg/Sq.cm.				
3.1	15 mm dia. Nominal bore	No.	10	1,084.61	10,846.12
	TOTAL OF SECTION B				60,00,121.17
C	EXTERNAL WATER SUPPLY SYSTEM				
	NOTE:				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	1.G.I. pipe shall be of Class C & ISI mark. 2.The rate shall inclusive of G.I. pipe line & fittings like bends,elbows,unions,Tee joints,couplings etc. required for making connections with the existing GI pipe line laid by other agency.				
1.0	Supplying & fixing on exposed surfaces as well as concealing the following dia. galvanised iron pipe of specified class consisting following items of work:-				
	i) Supplying galvanised mild steel screwed and socketed pipe conforming to IS 1239 (part-I) with galvanised mild steel or wrought steel fittings conforming to IS 1239 (part-II)				
	ii) Laying and fixing the pipe and specials on exposed surfaces to correct line, level and plumb for water supply line, overflow and vent using M.S. nails, rawl plugs, GI gutties and 'U' type G.I clamps having not less than 2 mm thick. the pipeline exposed as per the site requirement.				
	iii) Testing the pipe line to a hydraulic pressure of 10 Kg / Sq.cm for leak proof joint.				
	iv) Making leak proof threaded joints using White zinc, Spun yarn etc. including cutting the pipe, threading and the cost of jointing materials.				
	v) Cutting or making hole or chases in RCC or brick work structure such as wall, column, beam, slab, chajja, dado etc. for passing the pipe line and reinstating all the damage to its original condition proof joints.				
	vii) Painting the surface mounted pipe line after testing with two coats of oil paint of approved make and shade over a coat of approved primer.				
	vi) Pipe in chases shall be painted with two coats of bitumen paint, covered with polythene tape and a final coat of bitumen paint.				
	Class " C " (Heavy quality) G.I. pipe & fittings.				
1.1	80 mm dia. (Municipal Inlet)	Rmt.	50	1058.79	52939.57
1.2	65 mm dia. (Domestic Water Supply From UGT To OHT)	Rmt.	60	874.99	52499.63
1.3	50 mm dia. (Flushing Water Supply From UGT To OHT)	Rmt.	60	690.77	41446.11
2.0	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , 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 :	No.	2	8888.71	17777.42

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
3.0	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) : 80 mm dia nominal bore	No.	1	3218.28	3218.28
4.0	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 : 80 mm dia nominal bore	No.	1	4075.19	4075.19
5.0	Supplying, fixing, testing and commissioning of lever operated butterfly valve (wafer type) of PN 1.6 rating with S.S. - 304 Disc, S.G. Iron body, Nitrile / EPDM Rubber lining ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required				
5.1	80 mm dia. (For Water Meter Bypass)	No.	2	5119.68	10239.37
6.0	Providing and fixing Vent Pipes of length up to 1 metre having 600 mm vertical height above RCC cover slab of the water tanks(fixed in position with necessary GI lugs with split ends welded to the GI vent pipe as required and embedded in the RCC top slab), with semi-circular bend at top made using 2 nos. bends connected with a socket/ coupler, with outer open end of the bend covered with mosquito-proof coupling of approved Municipal design etc. all complete including making good the the RCC slab, wherever required, as specified , as per the drawings and as directed by the Engineer-in- Charge.	Nos.	20	1315.21	26304.25
6.1	Vent pipe with 50 mm diameter GI "C" Class Pipe along with lugs, sockets , bends and mosquito proof coupling etc. complete, provided and fixed in position.				
7.0	Supplying & fixing in position galvanised iron puddle flanges of 60 cm length with flange on one / both ends and welded to mild steel plate (5mm thick) in the centre etc. complete as directed by engineer-in-charge.				
7.1	Flange on Both Ends				
7.1.1	50 mm dia Puddle	No.	1	854.89	854.89
7.1.2	65 mm dia Puddle	No.	1	1139.85	1139.85
7.1.3	80 mm dia Puddle	No.	8	1271.37	10170.98
7.1.4	100 mm dia Puddle	No.	11	1885.14	20736.52
7.1.5	150 mm dia Puddle	No.	3	2586.58	7759.75
7.1.6	200 mm dia Puddle	No.	2	3288.03	6576.06
7.2	Flange on One End				
7.2.1	50 mm dia Puddle	No.	18	701.45	12626.04
7.2.2	65 mm dia Puddle	No.	1	920.65	920.65
7.2.3	80 mm dia Puddle	No.	18	1052.17	18939.06
7.2.4	100 mm dia Puddle	No.	23	1534.41	35291.54
7.2.5	150 mm dia Puddle	No.	12	2104.34	25252.08
7.2.6	200 mm dia Puddle	No.	1	2498.90	2498.90
	TOTAL OF SECTION C				351266.15

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
D	INTERNAL DRAINAGE (SOIL, WASTE & VENT, RAIN WATER)				
1.0	Providing and fixing soil, waste, vent and rain water pipes:Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989				
1.1	150 mm dia	Rmtr	600	1416.05	849627.36
1.2	100 mm dia	Rmtr	666	1334.73	888931.62
1.3	75 mm dia	Rmtr	2700	1212.34	3273326.14
2.0	Supply, installation, testing & commissioning of uPVC pipes as per IS 4985 of approved makes, concealed / exposed on walls of following diameters for anti-siphonage/Waste pipe with required fittings and jointing material & PVC supports for the exposed pipes in the shaft and labor etc. complete, as per directions of engineer-in-charge. (For Internal Toilet Area)				
2.1	50mm dia (Class 3)	Rmtr	10	416.48	4164.84
2.2	40mm dia (Class 3)	Rmtr	415	372.64	154647.08
2.3	32mm dia (Class 4)	Rmtr	10	385.80	3857.96
3.0	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts etc. complete, Sand cast iron S&S as per IS - 3989				
3.1	150 mm dia	Nos.	2	1227.53	2455.06
3.2	100 mm dia	Nos.	93	564.16	52467.18
3.3	75 mm dia	Nos.	181	470.19	85103.84
4.0	Providing and fixing plain bend of required degree, Sand cast iron S&S as per IS - 3989				
4.1	150 mm dia	Nos.	18	889.96	16019.29
4.2	100 mm dia	Nos.	184	477.52	87863.55
4.3	75 mm dia	Nos.	404	354.09	143052.93
5.0	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts etc. complete., Sand cast iron S&S as per IS - 3989				
5.1	100x100x100 mm	Nos.	72	1078.77	77671.59
5.2	75x75x75 mm	Nos.	216	846.28	182795.49
6.0	Providing and fixing double equal plain junction of required degree., Sand cast iron S&S as per IS - 3989				
6.1	100x100x100 mm	Nos.	33	1057.94	34911.89
6.2	75x75x75 mm	Nos.	475	790.67	375569.09
6.3	150x150x150 mm	Nos.	3	1578.26	4734.77
7.0	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts etc. complete., Sand cast iron S&S as per IS - 3989				
7.1	100x100x100x100 mm	Nos.	10	883.00	8829.98

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
8.0	Providing and fixing terminal guard., Sand cast iron S&S as per IS - 3989				
8.1	100 mm dia	Nos.	12	475.87	5710.43
8.2	75 mm dia	Nos.	34	378.65	12874.26
9	Providing and fixing deep seal "P" trap of self cleansing design with or without vent arm complete, including cost of cutting and making good the walls and floors complete, Sand cast iron S&S as per IS - 3989				
9.1	100 mm inlet and 75 mm outlet	Nos.	56	1534.41	85927.22
9.2	150 mm inlet and 150 mm outlet	Nos.	4	2858.40	11433.58
10.0	Providing and filling the joints with drip seal pipe joint sealant as per manufacturers specifications and as directed by Engineer In charge in S.C.I. / C.I. Pipes:				
10.1	75 mm dia Pipe	Nos.	3835	166.59	638886.45
10.2	100 mm dia Pipe	Nos.	1106	210.43	232740.03
10.3	150 mm dia Pipe	Nos.	345	254.27	87724.68
11.0	Providing and fixing PVC Multi nanitrap 110mm all complete. Providing and fixing Prince Swr Multi Nanitrap 110mm all complete as per direction of Engineer-in-charge.	Nos.	189	1301.35	245954.21
	TOTAL OF SECTION D				7567280.53
E	EXTERNAL SEWERAGE & STORM WATER DRAINAGE SYSTEM				
1.0	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 :				
1.1	150 mm dia.	Rmt	500	550.07	275034.63
1.2	250 mm dia.	Rmt	500	743.38	371688.29
1.3	300 mm dia.	Rmt	200	799.66	159932.49
2.0	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: to be less than 2.7kg as per standard design)of approved make rate including of.				
2.1	150 x 100 mm size P type, With sewer bricks conforming to IS : 4885	No.	10	2392.89	23928.91

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
3	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone- III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone- III) : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
3.1	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), With Sewer bricks conforming to IS : 4885	No.	5	11397.63	56988.14
3.2	Extra for depth for manholes : Size 90x80 cm, With Sewer bricks conforming to IS : 4885	Rmt	10	7663.81	76638.13
4.1	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg), With Sewer bricks conforming to IS : 4885	No.	10	23724.74	237247.43
4.2	Extra for depth for manholes : Size 120x90 cm, With Sewer bricks conforming to IS : 4885	Rmt	2	9190.82	18381.64
4.3	1500 mm Dia (For Depth more than 2.5 mtr up to 3.5 mtr) - Last chamber to be provided with Sewer Trap	No.	1	10142.04	10142.04
5.0	Constructing precast cement concrete solid block masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at in cement mortar 1:3(1 cement: 3 coarse sand) in side cement plaster 12mm thick with cement mortar 1:3(1 cement:3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregates 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.				
	0.91m 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 182 kg, fixed in cement concrete 1:2:4(1 cement: 2 coarse sand:4 graded stone aggregate 20mm nominal size) including centering shuttering all complete (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately)				

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
	With precast cement concrete 1:3:6 (1cement: 3 coarse sand : 6 graded stone aggregate 20mm nominal size) solid block	each	12	13247.80	158973.64
5.1	Extra depth for circular type manhole 0.91m internal dia (bottom) beyond 0.91m				
	With precast cement concrete 1:3:6 (1 cement: 3 coarse sand :6 graded stone aggregate 20 mm nominal size) solid block	metre	2	12605.36	25210.72
5.2	Construction of Grease Trap of internal dimension of 2500mm x 900mm as with 750mm water depth and the total internal depth shall be upto 1500mm consisting of following works:- i) Excavation in all type of soil and disposal of surplus earth. ii) Providing & laying of PCC M15 grade of 150mm thick including formwork. iii) Providing brick work in cement mortar (1:4) for 230mm external walls and 115mm thick for internal partition wall. iv) Providing RCC lintel in M25 grade for support of partition wall including formwork. (Reinforcement shall be measured & paid in relevant item) v) Plastering external and internal surface including partition wall incement mortar (1:3). Plaster should be water Proof				
	vi) Providing 50mm thick PCC of M25 grade for floor finished with neat cement. vii) Providing & laying of 150mm thick RCC slab of M25 grade including formwork finishing etc. Reinforcement shall be measured & paid in relevant item. viii) Providing RCC precast Fibre Reinforced Concrete (SFRC) manhole cover of size 600 x 600mm (internal) medium duty (MD-10 Designation) conforming to IS-12592. ix) Providing footrest of size 200 x 150mm plastic moulded steel reinforced @ 300mm Center to Center. x)Providing perforated aluminium bucket with 2.5mm dia perforations along with lifting chain. 1200mm x 600 mm x 750mm water depth	No.	2	56992.55	113985.09
6.0	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :				
6.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No.	10	6166.56	61665.63
7.0	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :				
7.1	With 20x20 mm square bar	Nos.	10	454.59	4545.95

Sr. No.	Description	Unit	Qty	Rate w/o GST	Amount w/o GST
8.0	Supplying and fixing in position C.I. manhole frame & cover (NECO or equivalent approved make), drainage channel grating etc. in required sizes, thickness and shapes as per the architectural drawings etc. including fixing frame in the concrete ,wherever required, locking arrangement etc. all complete , as specified and as directed by the Engineer-in-Charge.	Kg	200	96.45	19289.79
9.0	Construction of percolation well with inlet & overflow connection & shall be as per the drawing				
	Size : 2.5mtr. Diameter & 3.0mtr. (depth)	No.	9	65760.63	591845.68
	TOTAL OF SECTION E				2205498.22

Ref: NIT No: IITB/Dean (IPS)/CACI/H-19/NIT/R1 dated 31.10.2022		
NAME OF PROJECT - Construction of Hostel No. 19 Building for 1052 students (G+9 upper Storey's) including Finishing works, Water Supply & Sanitary installations, Internal Electrical Installation & Cable laying, Firefighting system, Automatic Fire Alarm & PA System, Lifts, Mechanical Ventilation and Development Works at IIT Bombay		
SUMMARY : MEPF ITEM-WISE SUMMARY		
SR. NO.	ITEM DESCRIPTION	AMOUNT RS. (without GST)
PART - III	ELECTRICAL WORKS	
A	MEDIUM VOLTAGE PANELS	1,09,65,876.64
B	DISTRIBUTION BOARDS	46,15,793.22
C	LT CABLES, END JOINTS, CABLE MARKER	78,30,833.90
D	POINT WIRING IN PVC CONDUIT, TELEPHONE WIRING, LAN CABLING ETC.	2,47,99,387.46
E	LIGHT FIXTURES AND FITTINGS, CEILING FANS & EXHAUST FANS ETC.	72,73,961.86
F	LIGHTNING PROTECTION SYSTEM	6,38,447.46
G	EARTHING SYSTEM	19,08,615.94
H	UPS	14,42,305.08
	TOTAL OF PART I - ELECTRICAL WORKS	5,94,75,221.56
PART - IV	FIRE ALARM SYSTEM & PUBLIC ADDRESS SYSTEM	
A	FIRE ALARM SYSTEM	1,15,52,411.02
B	PUBLIC ADDRESS SYSTEM	13,78,043.22
C	IP BASED CCTV SYSTEM (ONLY WIRING)	7,37,711.86
D	CABLE TV SYSTEM	30,897.46
E	ACCESS CONTROL SYSTEM	56,567.80
	TOTAL OF PART II - FIRE ALARM SYSTEM & PUBLIC ADDRESS SYSTEM	1,37,55,631.36
	TOTAL OF (PART I + PART II)	7,32,30,852.92
PART - V	FIRE FIGHTING SYSTEM	
A	FIRE PUMPS & RELATED EQUIPMENT / ACCESSORIES	46,27,130.51
B	INTERNAL & EXTERNAL HYDRANT SYSTEM	50,27,961.02
C	AUTOMATIC SPRINKLER SYSTEM	1,06,73,467.80
D	FIRE EXTINGUISHERS	1,48,640.68
	TOTAL OF PART III - FIRE FIGHTING SYSTEM	2,04,77,200.00
PART - VI	WATER SUPPLY PUMPS AND ACCESSORIES / EQUIPMENTS	7,72,267.80
PART-VII	DINING & KITCHEN AREA VENTILAITON SYSTEM	
A	VENTILATIONS FANS FOR FRESH & EXHAUST AIR APPLICATION	19,74,576.27
B	SHEET METAL WORKS	37,81,237.29
	TOTAL OF PART V- DINNING & KITCHEN AREA VENTILATION SYSTEM	57,55,813.56
PART-VIII	ELEVATOR WORKS	1,51,01,694.92
	GRAND TOTAL	11,53,37,829.19

NAME OF PROJECT - PROPOSED BUILDING FOR HOSTEL NO. 19, IIT BOMBAY AT POWAI.					
GENERAL IMPORTANT NOTES APPLICABLE TO THIS CONTRACT					
(APPLICABLE TO CIVIL, PHWORKS, FIRE FIGHTING, ELECTRICAL WORKS & Mechanical Ventilation WORKS)					
1	In addition to Clause 3.5.2 of Special Conditions of Contract Rate quoted for the items shall also be inclusive of :				
	a) Statutory traffic regulations in,force shall be considered for transporting material labour etc and nothing shall be paid extra on account of the restrictions imposed by the local statutory authorities, Royalty charges for excavation and transporting earth , debris, and other materials.				
	b) Transporting of material,labour,machinery etc to all heights & including locations of where direct access is non existing and including arranging own arrangement				
	c) Security Regulations & rules of I.I.T, and its constituent units shall be strictly followed while movement/deployment of materials & work forces and Cost arising due to security regulations.				
	d) Scaffolding to be provided for execution , shall be of Independent Scaffold Conforming to IS 2750 -latest revision.				
	e) Safety of Labours working at site shall be as per safety code enclosed in the specifications and to be strictly adhered by employing safety engineer.Safety at site is sole responsibility of contractor.				
	f) Adopting standard operating/ incorporating procedure for Griha requirement during Construction/ post construction.				
Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
PART I	ELECTRICAL WORKS				
A	MEDIUM VOLTAGE PANELS				
1.0	MEDIUM VOLTAGE PANELS				
	Supply, installation,testing & commissioning of floor mounting front operated front access cubicle type, totally enclosed, dust and vermin proof with IP-54 protection with hinged and lockable doors. Switchboards fabricated from 2 mm thick CRCA sheets including interconnections, tinned copper crimping lugs, bonding to earth and painting suitable for use at 415 V, 3 phase 4 wire 50 Hertz system, and suitable for a fault level of as indicated in SLD symmetrical at 415 V complete as per specifications, as required and as below : All switchboards shall have provision for entry of cables from the top/bottom as required. All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The bus bars insulation shall be with heat shrinkable sleeves. SMC/DMC shrouds and busbar supports shall be used.				
	Note :-				
	1) All G.A. & fabrication drawings shall be got approved from the E.I.C\Consultants. Final painting of panel to be done with powder coating. Necessary touch up may be done at site, incase if required. The scope includes all tests Heat run test (On main LT Panel only) , relevant I.S. and as required by E.I.C, shall have to be performed at factory in the presence of users & at installation site and shall be included in the quoted rate.				
	2) Stagewise inspection & Heat Run test is to be offered				
	3) The equipment shall be designed to ensure complete safety during operation inspection, connection of cables etc.				
	4) Control wires shall be of 1.1 KV 2.5 sq.mm FRLS copper wires and neatly bunched separately and adequately supported so as to prevent sagging and strain on termination.				
	5) A minimum of 10% spare terminals shall be provided on each terminal block.				
	6) All non current carrying metallic parts of the equipment shall be earthed with copper material.				
	7) All concealed hinged doors and covers shall be provided with suitable flexible earthing connections.				
	8) The size of the earth bus chosen shall be to withstand full fault current as mentioned panel wise.				
	9) Earth bus bar shall be supported at suitable intervals.				
	10) All the current transformers are resin cast type class-I only.				
	11) Scope includes cable end boxes, reverse entry boxes as per site conditions and extension of bus bars as required for terminating the number of cables as per schematic diagram.				
	12) G.A. & detailed fabrication drawing and short circuit forces and temp rise calculation for panel including the panel fabricator shall be submitted for dept. approval.				
	13) Bimetallic washers to be used for all aluminium to copper joints & it shall be of approved make & quality.				
	14) Indication lamp shall be cluster type LED.				
	15) All Outgoing feeders shall have 'ON' indication lamp.				
	16) All neutral shall be isolatable type.				
	17) All MCCB shall have minimum breaking capacity (Ics=Icu) as mentioned panelwise				
	18) All panel shall be provided with names plates of black perplex in white Engraving and to be provided on both front and back side of the panels as as safety feature and for proper identification of panel.				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1	Supply, Installation, Testing & Commissioning of free standing, floor mounting compartmentalized panels fabricated out of CRCA sheet steel sections after carrying out 7 tank cleaning process & duly powder coated using Siemens Grey shade no. RAL- 7032.				
1.1	MAIN LT PANEL - HOSTEL-19 BUILDING				
	NOTE: i) The two nos.2500A incomers in the main LT panel will be feed from nearest sub-station/s by IIT B.ii) IIT B will lay necessary cables from the sub-station/s to the main LT panel.iii) IIT B will also terminate all the cables on the two nos. 2500A incomers iv) The Main LT Panel will be manufactured as per details in the approved SLD.				
	There shall be interlocking of the both incomer and bus coupler in a manner that any given time both incomer supply power with bus - coupler remaining open while the failure at any incomer bus coupler shall close. Refer sld also.				
A.	INCOMERS:				
A.1	2 Nos. 2500 amps, 4P, 415V, 50HZ, AC, Ics=Icu=Icw = 50kA for 1 sec., EDO operated fully drawout type air circuit breaker & with built in microprocessor based release unit for total LSIG protections, indications and measurement as per specification and with following accessories :				
i.	Three nos. phase indicating light through protected by 2 amps MCB's. - 2 set				
ii.	Breaker ON / OFF / TRIP /SPRING CHARGE/TRIP CIRCUIT HEALTHY indicating lights with control MCB's. - 2 set				
iii.	Under voltage release - 2 set				
iv.	24 V DC Shunt trip coil - 2 set				
v.	96 x 96 mm sq. 0-2500/ 5 amps CTR digital ammeter with 3 nos. 2500/ 5 amps, Bar Primary, 15 VA Burden, CL : 1 accuracy CT's - 2 set				
vi.	96 x 96 mm sq. 0-500 Volt digital voltmeter with selector switch and protected by 2 amp TP MCB's - 2 set				
vii.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 2 set				
viii.	Breaker control switch - 2 set				
B	BUS-COUPLER				
B.1	1 Nos. 2500 amps, 4P, 415V, 50HZ, AC, Ics=Icu=Icw = 50kA for 1 sec., EDO operated fully drawout type air circuit breaker & with built in microprocessor based release unit for total LSIG protections, indications and measurement as per specification and with following accessories :				
i.	Three nos. phase indicating light through protected by 2 amps MCB's. - 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's - 1 set.				
v.	Breaker control switch - 1 set				
C.	Bus Bars				
	2500 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 50 KA for 1 sec.				
D.	Outgoing				
i.	1 no. 1000 amps 4 pole ACB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 50 KA. The ACB shall be complete as per technical specifications and single line daigram. (For Emergency panel)				
ii	1 no. 630 amps 4 pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 50 KA. The MCCB shall be complete as per technical specifications and single line daigram. (For Kitchen panel)				
iii	1 nos. 315 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 35 KA. The MCCB shall be complete as per technical specifications and single line daigram. (For MDB-ZONE-1)				
iv.	5 nos. 250 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 35 KA. The MCCB shall be complete as per technical specifications and single line daigram. (For MDB-ZONE-2,3,4,5,6)				
E.	Spare MCCB's of following :				
i.	4 no. 250 amps 4 Pole MCCB, with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 35 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
F.	Notes :				
i.	All outgoing feeders shall have suitable range of followings:-				
	a. Digital electronic KWH meter with RS 485 port.				
	b. Digital electronic ammeter with selector switch and 3 Nos. CT's.				
	c. All breakers shall be electrically/ mechanically interlocked as per single line diagram.				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
ii.	All MCCB's shall be rated for minimum 26 KA (ICS) breaking capacity.				
iii.	All ACB's shall be suitable for 50kA (Icu=lcs=lw for 1 sec.)				
iv.	415 / 110 V suitable rating control transformer shall be provided for aux. control supply if necessary.				
v.	Wiring with space heater, thermostat and control MCB's shall be provided in all vertical sections of main LT panel.				
vi	All incoming as well as outgoing feeders shall have pad locking facility.				
vii	suitable danger board shall be provided.				
viii	All bus bar section / backside panels shall have pad locking facility and hinged type door.				
	The Main LT panel -Hostel Building described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	43,92,522.88	43,92,522.88
1.2	EMERGENCY PANEL				
A.	INCOMER				
1	1 no. 1000 amps 4 pole ACB with microprocessor based release for complete LSIg protections and suitable for 415V, 50 Hz, A.C Supply and having lcs = lcu= 50 KA. The ACB shall be complete as per technical specifications and single line daigram.				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 1000 Amps digital electronic ammeter with selector switch and 3 nos. 1000/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs .- 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
	1000 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 50 KA for 1 sec.				
B	OUTGOINGS				
i.	1 no. 630 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 50 KA. The MCCB shall be complete as per technical specifications and single line daigram. (For fire fighting panel)				
ii.	1 no. 315 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 35 KA. The MCCB shall be complete as per technical specifications, single line daigram (For Pressurization fan panel)				
iii.	1 no. 200 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 35 KA. The MCCB shall be complete as per technical specifications, single line daigram (For Lift panel)				
iv.	1 no. 125 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram (For Plumbing panel)				
v.	2 no. 100 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram (For Lift Lighting panel & UPS panel)				
vi	4 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram (For DB-EXT LTG, DB-Security cabin, DB- pump room, Db- Terrace)				
vii	5 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram (For DB stair Z1&Z4, Z2&Z5, Z3&Z6, ELDB-1-Lobby, ELDB-2-Lobby)				
C	SPARE FEEDERS				
i	1 no. 100 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii	1 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	All MCB's shall be of 10KA breaking capacity.				
	The Emergency Panel described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	10,73,106.78	10,73,106.78
1.3	MDB ZONE-1				
A.	INCOMER:				
1	1 nos. 315 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 25 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
i	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 315 Amps digital electronic ammeter with selector switch and 3 nos. 315/5 amps. Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	BUS-BAR				
i.	315 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	1 no. 125 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii.	10 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCCB's of following rating :				
i.	1 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The MDB ZONE-1 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	3,38,704.24	3,38,704.24
1.4	MDB ZONE-2				
A.	INCOMER:				
1	1 nos. 250 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 25 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
i	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii	0- 250 Amps digital electronic ammeter with selector switch and 3 nos. 250/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iii	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	250 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOING:				
i.	8 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii.	2 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCCB's for the following :				
i.	2 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The MDB ZONE-2 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	3,14,795.76	3,14,795.76
1.5	MDB ZONE- 3				
A.	INCOMER:				
i.	1 nos. 250 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 25 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
ii.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
iii.	0- 250 Amps digital electronic ammeter with selector switch and 3 nos. 250/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iv.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
v.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
vi.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	250 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	8 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii	1 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCCB's for the following :				
ii.	2 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii.	1 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The MDB ZONE - 3 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	3,14,795.76	3,14,795.76
1.6	MDB ZONE-4				
A.	INCOMING:				
1	1 nos. 250 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 25 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
i	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0-250 Amps digital electronic ammeter with selector switch and 3 nos. 250/5 amps, Bar primary, 5 VA Burden, CL 1 accuracy CTs . - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	BUS BARS				
i.	250 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 10 KA for 1 sec.				
B	OUTGOINGS:				
i.	9 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii.	2 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCCB's for the following :				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
i	1 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The MDB ZONE-4 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	3,14,795.76	3,14,795.76
1.7	MDB ZONE-5				
A.	INCOMER:				
1	1 nos. 250 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 25 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
ii.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
iii.	0- 250 Amps digital electronic ammeter with selector switch and 3nos. 250/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iv.	3 nos. Phase indicating light protected by 2 amps SP MCB's. - 1 set				
v.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
vi	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	250 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS				
i.	9 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii	3 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCB's for the following :				
i	1 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The MDB ZONE-5 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	3,14,795.76	3,14,795.76
1.8	MDB ZONE-6				
A.	INCOMER:				
1	1 nos. 250 amps, 4 Pole MCCB with microprocessor based release for complete LSIG protections and suitable for 415V, 50 Hz, A.C Supply and having Ics = Icu= 25 KA. The MCCB shall be complete as per technical specifications and single line daigram.				
ii.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
iii.	0- 250 Amps digital electronic ammeter with selector switch and 3nos. 250/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iv.	3 nos. Phase indicating light protected by 2 amps SP MCB's. - 1 set				
v.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
vi	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	250 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS				
i.	8 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii	1 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCB's for the following :				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
i	1 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii	1 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The MDB ZONE-6 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	3,04,169.49	3,04,169.49
1.9	MAIN DB- LAUNDARY PANEL				
	Refer SLD layout				
A.	INCOMER:				
1	1 no. 125 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 200 Amps digital electronic ammeter with selector switch and 3nos. 200/5 amps , Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
3	Bus Bars				
i.	125 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	2 nos. 63 amps TP MCB suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 10 KA.				
C	SPARE FEEDERS				
i	2 nos. 63 amps TP MCB suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 10 KA.				
	The 'MAIN DB- LAUNDARY PANEL' as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	98,290.50	98,290.50
1.10	FIRE FIGHTING PANEL				
	Refer SLD layout				
A.	INCOMER:				
1	1 no. 630 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 50 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 630 Amps digital electronic ammeter with selector switch and 3nos. 630/5 amps , Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
3	Bus Bars				
i.	630 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	2 nos. 315 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 35 KA. The MCCB is connected to Star Delta starter & Overload relay (Type 2 coordination) .One Set of ON/OFF/TRIP indicating Lamps & one set of Start/Stop Push Buttons shall be provided. The MCCB & Star delta starter shall be complete as per technical specifications, single line daigram and with accessories as shown in SLD.				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
ii.	2 no. 63 amps Four pole, MCCB with thermal magnetic trip unit for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having and having Ics=Icu= 25 KA. The MCCB is connected to D.O.L Starter & overload relay starter(Type 2 coordination).One Set of ON/OFF/TRIP indicating Lamps & one set of Start/Stop Push Buttons shall be provided. The MCCB & starter shall be complete as per technical specifications, single line daigram and with accessories as shown in SLD.The cost shall include provision for remote ON/OFF for each Jockey Pump.				
ii.	2 no. 160 amps Four pole, MCCB with thermal magnetic trip unit for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
	The Fire Fighting Panel as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	6,09,666.95	6,09,666.95
1.11	PLUMBING PANEL				
	Refer SLD layout				
A.	INCOMER:				
1	1 no. 125 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 125 Amps digital electronic ammeter with selector switch and 3nos. 125/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs. - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	125 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports. 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	6 no. 40 amps Four pole, C curve, MCB suitable for 415V, 50 Hz, A.C supply and having and having Ics=Icu= 10 KA. The MCCB is connected to D.O.L Starter & overload relay starter(Type 2 coordination).One Set of ON/OFF/TRIP indicating Lamps & one set of Start/Stop Push Buttons shall be provided. The MCCB & starter shall be complete as per technical specifications, single line daigram and with accessories as shown in SLD.The cost shall include provision for remote ON/OFF				
ii.	2 no. 16 amps Four pole, C curve, MCB suitable for 415V, 50 Hz, A.C supply and having and having Ics=Icu= 10 KA. The MCCB is connected to D.O.L Starter & overload relay starter(Type 2 coordination).One Set of ON/OFF/TRIP indicating Lamps & one set of Start/Stop Push Buttons shall be provided. The MCCB & starter shall be complete as per technical specifications, single line daigram and with accessories as shown in SLD.The cost shall include provision for remote ON/OFF				
C	Spare MCB's for the following :				
i.	2 no. 40 amps Four pole, C curve, MCB suitable for 415V, 50 Hz, A.C supply and having and having Ics=Icu= 10 KA.				
D	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The Plumbing Panel as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	2,49,711.00	2,49,711.00
1.12	BOOSTER PANEL-1 &2				
A.	INCOMER:				
1	1 no. 160 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
ii.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
iii.	0- 250 Amps digital electronic ammeter with selector switch and 3nos. 250/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs. - 1 set				
iv.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
v.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
vi	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
i.	160 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	6 nos. 63 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 25KA. The MCCB is connected to D.O.L Starter & overload relay starter (Type 2 coordination). One Set of ON/OFF/TRIP indicating Lamps & one set of Start/Stop Push Buttons shall be provided. The MCCB & starter shall be complete as per technical specifications, single line diagram and with accessories as shown in SLD. The cost shall include provision for remote ON/OFF				
C	Spare MCB's for the following :				
i.	1 nos. 40 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 25KA.				
D	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	All MCB's shall be of 10KA breaking capacity.				
	The BOOSTER PANEL-1 & 2 as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	2	3,34,719.00	6,69,438.00
1.13	LIFT PANEL				
A.	INCOMER:				
1	1 no. 200 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line diagram and with following accessories:				
ii.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
iii.	0- 250 Amps digital electronic ammeter with selector switch and 3nos. 250/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs. - 1 set				
iv.	3 nos. Phase indicating light protected by 2 amps SP MCB's. - 1 set				
v.	Breaker ON / OFF / TRIP indicating lights with control MCB's. - 1 set.				
vi.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	200 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	6 nos. 63 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 25KA.				
C	Notes:-				
	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The LIFT PANEL as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	2,16,185.97	2,16,185.97
1.14	LIFT LIGHTING PANEL				
A.	INCOMER				
1	1 no. 100 amps Four Pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line diagram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 100 Amps digital electronic ammeter with selector switch and 3 nos. 100/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs. - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's. - 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's. - 1 set.				
v.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
	100 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
i.	6 no. 32 amps TWO Pole MCB suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 10 KA. The MCB shall be complete as per technical specifications and single line daigram.				
C	SPARE FEEDERS				
i	1 no. 32 amps TWO Pole MCB suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 10 KA. The MCB shall be complete as per technical specifications and single line daigram.				
D	Notes:-				
	All MCCB's shall be of 25 KA (lcs) breaking capacity.				
	All MCB's shall be of 10KA breaking capacity.				
	The LIFT LIGHTING Panel described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	83,679.75	83,679.75
1.15	PRESSURISATION FAN PANEL				
	Refer SLD layout				
A.	INCOMER:				
1	1 no. 315 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcs= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 315 Amps digital electronic ammeter with selector switch and 3nos. 315/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
v.	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
3	Bus Bars				
i.	315 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	12 nos. 63 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 25KA. The MCCB is connected to STAR DELTA Starter & overload relay starter(Type 2 coordination).One Set of ON/OFF/TRIP indicating Lamps & one set of Start/Stop Push Buttons shall be provided. The MCCB & starter shall be complete as per technical specifications, single line daigram and with accessories as shown in SLD.The cost shall include provision for remote ON/OFF				
C	SPARE FEEDERS				
i.	1 nos. 63 amps Four Pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 25KA. The MCB shall be complete as per technical specifications and single line daigram.				
D	Notes:-				
i)	All MCCB's shall be of 25 KA (lcs) breaking capacity.				
	The ' PRESSURISATION Panel ' as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	6,60,140.25	6,60,140.25
1.16	UPS INPUT PANEL				
	Refer SLD layout				
A.	INCOMER:				
1	1 no. 100 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=lcs= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 100 Amps digital electronic ammeter with selector switch and 3nos. 100/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs . - 1 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
3	Bus Bars				
i.	100 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
i.	2 nos. 63 amps TPN MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA.				
C	Notes:-				
i)	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The 'UPS INPUT Panel' as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	1,05,210.68	1,05,210.68
1.17	UPS OUTPUT PANEL				
	Refer SLD layout				
A.	INCOMER:				
1	2 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
i.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
ii.	0- 63 Amps digital electronic ammeter with selector switch and 3nos. 63/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs. - 2 set				
iii.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
iv.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
3	Bus Bars				
i.	125 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	6 nos. 40 amps FP MCB suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 10 KA.				
C	SPARE FEEDERS				
i	2 nos. 40 amps FP MCB suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 10 KA.				
D	Notes:-				
i)	All MCCB's shall be of 25 KA (Ics) breaking capacity.				
	The 'UPS OUTPUT Panel' as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	1,35,481.50	1,35,481.50
1.18	KITCHEN PANEL				
A.	INCOMER:				
1	1 no. 630 amps Four pole MCCB with Microprocessor based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram and with following accessories:				
ii.	0-500 volts digital electronic volt meter with selector switch and protected by 2 amps TP MCB's. - 1 set				
iii.	0- 630 Amps digital electronic ammeter with selector switch and 3nos. 630/5 amps, Bar Primary, 15 VA Burden, CL 1 accuracy CTs. - 1 set				
iv.	3 nos. Phase indicating light protected by 2 amps SP MCB's.- 1 set				
v.	Breaker ON / OFF / TRIP indicating lights with control MCB's.- 1 set.				
vi	Electronic Digital Load Manager with ready RS485 communication port and MODBUS protocol. - 1 set				
2	Bus Bars				
i.	630 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% purity Tinned Copper (Throughout the length) busbars with colour coded heat shrink sleeves supported on SMC type grip supports, 25 KA for 1 sec.				
B	OUTGOINGS:				
i.	2 nos. 125 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii.	2 nos. 100 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
iii.	3 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having Ics=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
iv.	6 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having having breaking capacity of 10 KA. The MCCB shall be complete as per technical specifications, single line daigram				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
v	6 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having breaking capacity of 10 KA. The MCCB shall be complete as per technical specifications, single line daigram				
C	Spare MCB's for the following :				
i.	1 no. 100 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
ii.	1 no. 63 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
iii.	1 no. 40 amps Four pole MCCB with thermal magnetic based release for overload and short circuit protections and suitable for 415V, 50 Hz, A.C supply and having lcs=Icu= 25 KA. The MCCB shall be complete as per technical specifications, single line daigram				
D	Notes:-				
	All MCCB's shall be of 25 KA (lcs) breaking capacity.				
	The KITCHEN PANEL as described above complete with wiring, line diagram, specifications and approvals, painting and as per direction and final approval of Owner / Consultant.	No.	1	7,70,385.59	7,70,385.59
A	TOTAL OF SECTION A				1,09,65,876.64
B	DISTRIBUTION BOARDS				
	READYMADE DISTRIBUTION BOARDS				
	Fabrication, inspection at works Supply, installation, testing & commissioning of following readymade distribution boards, double door, IP 42 degree protection complete with necessary, MCB isolators , MCBs, earth leakage circuit breaker (ELCB) etc including interconnections with appropriate capacity size of PVC insulated copper conductor wires (ISI marked),suitable for concealed mounting /wall mounting with MS frame work of 40 x 40 x 5 mm MS angle iron, with M.S. enclosure fabricated out of min 16 SWG thick M.S. CRCA sheet with concealed hinged door, locking arrangement etc. including earthing clamps for both incoming & outgoing circuits, interconnections, per phase isolation kit as required,cable end box & wire way box if required, continuous copper earth wire in the wire way box with single/duplicate brass earthing terminals, danger board, name plate, flexible earthing for the door, metal treatment & powder coated painting, Phase Distribution drawing etc. all as per drawings (G.A. & fabrication drawing to be got approved), etc. relevant IS & instruction of Engineer-in-charge.				
	Note:				
	1.MCBs shall be minimum 10 KA breaking capacity (Type –C)				
	2. Blanking Plates shall be included in scope of work.				
	3. DB shall be of standard readymade type as per catalouge No. from approved manufacturers as indicated in preferred makes of material.				
	4. Wire way & cable end box also end & locking plates shall be provided.				
	5. Routine tests will be conducted at factory in presense of user as per relevant IS.				
	All Electrical component should have IS mark				
	Note:				
	8 Way SPN DB should have 8 nos. of SP MCB as outgoings.				
	Similarly For Other way DB'S				
1	LPDB :(LPDB-Z1-GF,LPDB-Z4-GF, DB LAUNDARY-1,2, LPDB-9F-Z3(2LVL), LPDB-9F-Z1-FLR-DB (2LVL), LPDB-9F-Z4-FLR-DB (2LVL),LPDB-2F-Z1-FLR DB, LPDB-2F-Z2-FLR DB, LPDB-2F-Z3-FLR DB, LPDB-2F-Z4-FLR-DB, LPDB-2F-Z5-FLR-DB, LPDB-3F-Z1-FLR-DB, LPDB-3F-Z2-FLR DB, LPDB-3F-Z3-FLR DB,LPDB-3F-Z4-FLR-DB,LPDB-3F-Z5-FLR-DB, LPDB-3F-Z6-FLR-DB, LPDB-4F-Z3-FLR DB(4LVL), LPDB-4F-Z2-FLR DB (4LVL), LPDB-4F-Z1-FLR DB(4LVL), LPDB-4F-Z5-FLR DB (4LVL), LPDB-4F-Z4-FLR DB (4LVL)-8 way TPN DB,)	Set	41	4,836.44	1,98,294.07
	a) 63 A 4P MCB as incomer -- 1 No.	Nos	41	1,561.02	64,001.69
	b) 63 A, 4 pole ELCB with 100mA sensitivity	Nos	41	2,585.59	1,06,009.32
	c) 6 - 32 A SP MCB -- 24 nos	Nos	984	209.32	2,05,972.88
2	LPDB :(LPDB-Z5-GF, DB-GYM, LPDB-1F-Z4-FLR DB: 8 way TPN DB)	Set	3	4,836.44	14,509.32
	a) 40 A 4P MCB as incomer -- 1 No.	Nos	3	1,561.02	4,683.05
	b) 40 A, 4 pole ELCB with 100mA sensitivity	Nos	3	2,141.53	6,424.58
	c) 6 - 32 A SP MCB -- 24 nos	Nos	72	209.32	15,071.19
3	LPDB :(6 way TPN DB For LPDB-9F-Z6-GF (2LVL), LPDB-9F-Z2-FLR-DB (2LVL),LPDB-9F-Z5-FLR-DB (2LVL), LPDB-2F-Z6-FLR-DB, LPDB-4F-Z6-FLR DB(4LVL), DB KITCHEN EQPT-1,4)	Set	13	3,881.36	50,457.63
	a) 63 A 4P MCB as incomer -- 1 No.	Nos	13	1,561.02	20,293.22

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	b) 63 A, 4 pole ELCB with 100mA sensitivity	Nos	13	2,585.59	33,612.71
	c) 6 - 32 A SP MCB -- 18 nos	Nos	234	209.32	48,981.36
4	LPDB :(6 way TPN DB For LPDB-1F-Z1-FLR DB, LPDB-1F-Z2-FLR DB, LPDB-D1-Z2-GF)	Set	3	3,881.36	11,644.07
	a) 40 A 4P MCB as incomer -- 1 No.	Nos	3	1,561.02	4,683.05
	b) 40 A, 4 pole ELCB with 100mA sensitivity - 3Nos.	Nos	3	2,141.53	6,424.58
	c) 6 - 32 A SP MCB -- 18 nos	Nos	54	209.32	11,303.39
5	LPDB :(LPDB-Z3-GF, LPDB-Z6-GF,ELDB-1,2-LOBBY (E), LPDB-D2-Z5-GF,LPDB-D1-Z2-GF,STAIRCASE- ZONE 1 TO ZONE 6, LPDB-CAFETERIA): 4 way TPN DB)	Set	12	3,224.58	38,694.92
	a) 40 A 4P MCB as incomer -- 1 No.	Nos	12	1,561.02	18,732.20
	b) 40 A, 4 pole ELCB with 100mA sensitivity	Nos	12	2,141.53	25,698.31
	c) 6 - 32 A SP MCB -- 12 nos	Nos	144	209.32	30,142.37
6	LPDB :(4 way TPN DB -LDB-KITCHEN)	Set	1	3,224.58	3,224.58
	a) 40A FP MCB as incomer	Nos	1	1,561.02	1,561.02
	b) 40A, 4 pole ELCB with 300mA sensitivity as incomer	Nos	1	2,497.46	2,497.46
	c) 6 - 32 A SP MCB -- 12 nos.	Nos	12	209.32	2,511.86
7	LPDB :(4 way TPN DB) - TERRACE DB	Set	1	3,224.58	3,224.58
	a) 63 A 4P MCB as incomer -- 1 No.	Nos	1	1,561.02	1,561.02
	b) 63 A, 4 pole ELCB with 30mA sensitivity - 1Nos.	Nos	1	2,918.64	2,918.64
	c) 6 - 32 A SP MCB -- 24 nos	Nos	12	209.32	2,511.86
8	LPDB :(4 way TPN DB - UPS DB-1,2,3,4,5&6)	Set	6	3,224.58	19,347.46
	b) 40A FP MCB as incomer	Nos	6	1,561.02	9,366.10
	c) 6 - 32 A SP MCB -- 12 nos.	Nos	72	209.32	15,071.19
9	LPDB :(12 way SPN DB - IRON ROOM, DB-1 STATIONARY)	Set	2	2,157.63	4,315.25
	a) 32A, 2 pole ELCB with 30mA sensitivity as incomer	Nos	2	2,023.73	4,047.46
	b) 32A DP MCB as incomer	Nos	2	584.75	1,169.49
	c) 6 - 32 A SP MCB -- 8 nos.	Nos	16	209.32	3,349.15
10	LPDB 1-5, LPDB-COMMON/TV RM :(12 way SPN DB - DOUBLE BED)	Set	6	2,157.63	12,945.76
	a) 32A, 2 pole ELCB with 30mA sensitivity as incomer &	Nos	6	2,023.73	12,142.37
	b) 32A DP MCB as incomer	Nos	6	584.75	3,508.47
	c) 6 - 32 A SP MCB -- 8 nos.	Nos	48	209.32	10,047.46
11	LPDB-ROOMS :(8 way SPN DB DB-Z1 TO Z6 -TYP ROOM, DB-Z1 TO Z6 SINGLE ROOM)	Set	572	1,850.00	10,58,200.00
	a) 32A, 2 pole RCBO with 100mA sensitivity as incomer	Nos	572	2,731.36	15,62,335.59
	b) 32A DP MCB as incomer	Nos	572	584.75	3,34,474.58
	c) 6 - 32 A SP MCB -- 4 nos.	Nos	2288	209.32	4,78,928.81
12	LPDB :(8 way SPN DB - LIFT M/C ROOM DB)	Set	6	1,850.00	11,100.00
	a) 32A, 2 pole ELCB with 30mA sensitivity as incomer	Nos	6	2,023.73	12,142.37
	b) 32A DP MCB as incomer	Nos	6	584.75	3,508.47
	c) 6 - 32 A SP MCB -- 4 nos.	Nos	24	209.32	5,023.73
13	10 way VTPN DB (PDB CAFÉ-KITCHEN)	Set	1	10,329.66	10,329.66
	a) 63A TP MCB as incomer	Nos	1	882.20	882.20
	b) 32A TP MCB -- 3 No.	Nos	4	874.58	3,498.31
	c) 25A, SP MCB- 21 Nos.	Nos	21	209.32	4,395.76
14	8 way TPN DB (DB KITCHEN EQPT-2)	Set	1	1,850.00	1,850.00
	a) 63 A 4P MCB as incomer -- 1 No.	Nos	1	1,561.02	1,561.02
	b) 63 A, 4 pole ELCB with 30mA sensitivity - 1Nos.	Nos	1	2,918.64	2,918.64
	c) 6 - 32 A SP MCB -- 24 nos	Nos	24	209.32	5,023.73
15	12 way TPN DB (DB KITCHEN EQPT-3)	Set	1	2,157.63	2,157.63
	a) 63 A 4P MCB as incomer -- 1 No.	Nos	1	1,561.02	1,561.02
	b) 63 A, 4 pole ELCB with 30mA sensitivity - 1Nos.	Nos	1	2,918.64	2,918.64
	c) 6 - 32 A SP MCB -- 36 nos	Nos	36	209.32	7,535.59

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
16	4 way VTPN DB (DB DINING VENTILATION, DB KITCHEN VENTILATION)	Set	2	5,939.83	11,879.66
	a)100A FP MCCB -- 1 No.	Nos	2	7,754.24	15,508.47
	b) 63A, TP MCB- 4 Nos.	Nos	8	882.20	7,057.63
17	6 way VTPN DB (DB DINING VENTILATION-2)	Set	1	8,139.83	8,139.83
	a)100A FP MCCB -- 1 No.	Nos	1	7,754.24	7,754.24
	b) 63A, TP MCB- 6 Nos.	Nos	6	882.20	5,293.22
18	Supply, installation, testing and commissioning of 63 amps 4P RCBO with 300 mA sensitivity in 1.6 mm thick CRCA sheet steel enclosure of approved make design and powder coated with approved paint shade complete as required and as per instructions of E-I-C. Scope also includes 25 x 25 x 3 mm angle iron frame work for mounting on wall (For power supply to lift machine in lift machine room)	No.	6	3,143.22	18,859.32
B	TOTAL OF SECTION B				46,15,793.22
C	L.T.Cables, End Joints, cable marker				
1.0	LT. Cables				
	Supply, handling, laying effecting proper connections testing and commissioning of following sizes of 1.1 KV grade PVC / XLPE core insulated, extruded PVC inner sheath, armoured / unarmoured extruded outer sheath FRLS PVC, Copper / Aluminium conductor cables as per IS 7098 Part I laid over MS supports, cable racks, trenches, or fixing on walls including clamping the cable to supports in an approved manner along with cable . (Earthing will be measured separately and need not be quoted under this item). All complete as required and as per final instruction as given by E.I.C / Consultants.				
1.1	3.5 C x 300 sq. mm., XLPE Al. Armoured cable	Rmt.	50	1,905.93	95,296.61
1.2	3.5 C x 240 sq. mm., XLPE Al. Armoured cable	Rmt.	320	1,588.98	5,08,474.58
1.3	3.5 C x 185 sq. mm., XLPE Al. Armoured cable	Rmt.	375	1,274.58	4,77,966.10
1.4	3.5 C x150 sq.mm., XLPE Al. Armoured cable	Rmt.	500	220.34	1,10,169.49
1.5	3.5 C x 120 sq.mm., XLPE Al. Armoured cable	Rmt.	20	906.78	18,135.59
1.6	3.5 C x 70 sq.mm., XLPE Al. Armoured cable	Rmt.	630	613.56	3,86,542.37
1.7	3.5 C x 50 sq.mm., XLPE Al. Armoured cable	Rmt.	72	348.31	25,077.97
1.8	3.5 C x 35 sq.mm., XLPE Al. Armoured cable	Rmt.	55	276.27	15,194.92
1.9	4 C x 16 sq.mm.,XLPE Cu. Armoured cable	Rmt.	2700	816.95	22,05,762.71
1.10	4 Core x 10 sq.mm., XLPE Copper Armoured Cable	Rmt.	310	566.95	1,75,754.24
1.11	4 Core x 6 sq.mm., XLPE Copper Armoured Cable	Rmt.	1240	375.42	4,65,525.42
1.12	3 Core x 10 sq.mm., XLPE Copper Armoured Cable	Rmt.	2120	443.22	9,39,627.12
1.13	3 Core x 6 sq.mm., XLPE Copper Armoured Cable	Rmt.	875	285.59	2,49,894.07
1.14	3 Core x 6 sq.mm., XLPE Copper UnArmoured Cable	Rmt.	880	272.88	2,40,135.59
1.15	3 C x 70 sq.mm.,XLPE AL. Armoured cable	Rmt.	100	470.34	47,033.90
1.16	1 C x 16 sq.mm.,XLPE Cu. Armoured cable	Rmt.	300	231.36	69,406.78
2.0	CABLE TERMINATION				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	Supply and making terminal joints for the following sizes of 1.1KV grade PVC / XLPE Insulated armoured / unarmoured Copper / Aluminium conductor cables including providing heavy duty bimetallic, crimping type terminal lugs wherever Aluminium conductor cables are used Copper Gland Earthing as directed by E.I.C., insulation tape, heavy duty double compression type brass glands effecting terminal connection to the equipment/Panel complete as required as per final direction and approval of the Owner/Consultant.				
2.1	3.5 C x 300 sq. mm., XLPE Al. Armoured cable	Nos	6	983.90	5,903.39
2.2	3.5 C x 240 sq. mm., XLPE Al. Armoured cable	Nos	6	850.00	5,100.00
2.3	3.5 C x 185 sq. mm., XLPE Al. Armoured cable	Nos	6	738.14	4,428.81
2.4	3.5 C x 150 sq. mm., XLPE Al. Armoured cable	Nos	10	583.05	5,830.51
2.5	3.5 C x 120 sq. mm., XLPE Al. Armoured cable	Nos	2	513.56	1,027.12
2.6	3.5 C x 70 sq. mm., XLPE Al. Armoured cable	Nos	8	386.44	3,091.53
2.7	3.5 C x 50 sq. mm., XLPE Al. Armoured cable	Nos	6	345.76	2,074.58
2.8	3.5 C x 35 sq. mm., XLPE Al. Armoured cable	Nos	6	315.25	1,891.53
2.9	4 C x 16 sq. mm., XLPE Cu. Armoured cable	Nos	138	301.69	41,633.90
2.10	4 Core x 10 sq. mm., XLPE Copper Armoured Cable	Nos	20	301.69	6,033.90
2.11	4 Core x 6 sq. mm., XLPE Copper Armoured Cable	Nos	64	246.61	15,783.05
2.12	3 Core x 10 sq. mm., XLPE Copper Armoured Cable	Nos	52	237.29	12,338.98
2.13	3 Core x 6 sq. mm., XLPE Copper Armoured Cable	Nos	40	237.29	9,491.53
2.14	3 Core x 6 sq. mm., XLPE Copper UnArmoured Cable	Nos	12	237.29	2,847.46
2.15	3 C x 70 sq. mm., XLPE AL. Armoured cable	Nos	8	355.93	2,847.46
2.16	1 C x 16 sq. mm., XLPE Cu. Armoured cable	Nos	36	209.32	7,535.59
3.0	CABLE TRAYS				
	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required.				
3.1	900mm Width X 75mm Depth X 2mm Thickness	Rmt.	226	1,244.07	2,81,159.32
3.2	450mm Width X 50mm Depth X 2mm Thickness	Rmt.	200	735.59	1,47,118.64
3.3	300mm Width X 50mm Depth X 1.6mm Thickness	Rmt.	32	652.54	20,881.36
3.4	200mm Width X 50mm Depth X 1.6mm Thickness	Rmt.	270	627.12	1,69,322.03
3.5	100mm Width X 50mm Depth X 1.6mm Thickness	Rmt.	130	500.00	65,000.00
4.0	UNDER FLOOR RACEWAY / TRUNKING				
	Supply and laying of Fabricated hot dip galvanised, GI under floor trunking system as per relevant IS. Trunks to be laid in the floor for the power cable from Main LT Panel to MDB with all necessary accessories to complete the job. (Necessary civil work is part of job)				
4.1	400 (W) x 50 (H) mm - 2 mm thick	Rmt.	10	4,372.03	43,720.34
4.2	200 (W) x 50 (H) mm - 2 mm thick	Rmt.	220	2,450.85	5,39,186.44
5.0	UNDER FLOOR RACEWAY / TRUNKING JUNCTION BOX				
	Supply and installation of Hot dip galvanised, GI fabricated floor junction boxes as per relevant IS. The job includes aligning of boxes with the raceways and making necessary arrangement to take the knock outs from them to lay the wires, with all necessary accessories required to complete the job. (The civil work like cutting of the floor to be embedded in junction boxes in the floor to be included in the rate). Top cover shall be made up from 2.5 mm thick GI steel plate.				
5.1	450 (L) x 450 (W) x 50 (H) mm JB - 2 mm thick	No.	1	5,834.75	5,834.75

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
5.2	300 (L) x 300 (W) x 50 (H) mm JB - 2 mm thick	No.	41	4,000.00	1,64,000.00
6.0	UNDERGROUND CABLING				
6.1	Providing, laying and fixing following dia HDPE Pipe. as required.				
i.	100mm Dia.	Rmt.	60	110.17	6,610.17
ii.	150mm Dia.	Rmt.	865	132.20	1,14,355.93
iii.	250mm Dia.	Rmt.	10	165.25	1,652.54
iv	300mm Dia.	Rmt.	520	219.49	1,14,135.59
	TOTAL OF SECTION C				78,30,833.90
D	POINT WIRING IN PVC CONDUIT, TELEPHONE WIRING, LAN CABLING ETC.				
	GENERAL NOTES				
	Required clearances from the concerned statutory authorities are in the scope of this work. Statutory fees paid will be reimbursed on production of original receipts in the name of IITB.				
	Please follow the GRIHA norms for luminous efficacy, lighting levels, illumination level etc. without extra cost.				
	Mode of measurement shall be as per point basis. The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
1	Point wiring in PVC conduit				
	Point wiring for light/ceiling fan/6A/ 16A/ socket outlet /6A outlet for exhaust fan , bell point etc. with 1.1 KV grade FRLS PVC insulated multistranded copper conductor wire (ISI marked), in 25 to 40 mm dia High mechanical stress (MMS) rigid PVC conduit / PVC trunking having ISI marked IS 9537 Part - 3, including fixing accessories & hardware concealed /exposed in slab/wall or on 5mm. thick G.I. spacers fixed with no. 10 nut within the box piece fold wood screws with nylon plug complete with all conduit accessories 20 SWG G.I. Saddles, ready made MS switchboxes, socket outlet boxes of approved makes zinc chromate passivated, brass earthing stud 1/2 nos, controlling modular switches & sockets with moulded front plate and inner plate etc. including appropriate size of FRLS PVC insulated copper earth wire , brass/bakelite (straight / angular) lamp holders, 3 plate ceiling rose, 16 A, connectors, painting etc. as per specifications and drawings and as per instructions of E-I-C and as detailed below : (sample switch Box etc. to be got approved before fabrication) as per specification.				
	NOTE:				
	1. Connections shall be done with crimped type tinned copper lugs & washers.				
	2. All switches & socket outlets shall be as per preferred makes.				
	3. All sample boxes with accessories /fixtures shall be got approved from Department.				
	4. All 16 A socket outlets should be with 6 pin & shuttered type				
	5. MS boxes other than switch boxes & socket outlet boxes shall be fabricated out of 16 SWG thickness MS sheet duly painted with red oxide primer & 2 coats of synthetic enamel paint.				
	6. Minimum size of the FRLS insulated copper earth wire continuity shall be 2.5 sq.mm.				
	7. The colour shade of switches & cover plates shall be white /off white & to be approved by E-I-C				
	8. The scope also includes supply of modular blanking plates where ever required.				
	9. The maximum permissible number of PVC insulated wires through PVC conduits shall be as per IS/NBC : 2016.				
	10. All FRLS Wires Should be tested at factory before despatch				
	11. Wiring from DB to Main Switch, From Main Switch to Switch Board & if any Looping from Switch board to Switch board shall be part of point wiring .				
	12. MS pull out boxes of required size & of 16 Gauge with cover are to be provided at both the ends of expansion joint as per the instructions of EIC for each & every conduit included in this schedule & passing through expansion joint, irrelevant of the type of service it is carrying.				
	13. Mode of measurement shall be as per point basis. The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
1.1	Ground floor area :				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.1.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	306.00	753.39	2,30,537.29
1.1.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	635.00	486.44	3,08,889.83
1.1.3	Wiring from DB to Primary Light point with 2 nos of 2.5 sq.mm wires along with 1 no of 2.5 sq.mm insulated earth wires & Primary point to Secondary Light point with 2 nos of 1.5 sq.mm wires alongwith 1 no of 1.5 sq.mm insulated earth wire looped to item No. 1.1.1 above as per specification.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	2150	175.42	3,77,161.02
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	7200	153.39	11,04,406.78
1.1.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
i)	6A Switch	Nos	96	88.98	8,542.37
ii)	16A Switch	Nos	281	138.98	39,054.24
iii)	20A Switch	Nos	86	314.41	27,038.98
iii)	6A Socket	Nos	96	116.95	11,227.12
iv)	6-16A Socket	Nos	281	183.90	51,675.42
v)	20A Socket	Nos	86	324.58	27,913.56
1.1.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.	Pt.			
i)	2 Module	Nos	14	255.08	3,571.19
ii)	3 Module	Nos	174	280.51	48,808.47
iii)	4 Module	Nos	6	301.69	1,810.17
iv)	6 Module	Nos	67	350.00	23,450.00
v)	8 Module	Nos	2	402.54	805.08
vi)	12 Module	Nos	3	455.93	1,367.80
vii)	18 Module	Nos	1	607.63	607.63
1.2	Kitchen Lighting and Equipments Wiring / Power outlets :				
1.2.1	Wiring from Power DB to Equipment Power point with following Wire sizes.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	1300	175.42	2,28,050.85
ii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	4870	210.17	10,23,525.42
iii)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	200	261.86	52,372.88
1.2.3	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A, "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required. (For Kitchen equipments)	Pt.	108	1,204.24	1,30,057.63
1.2.4	Supplying and fixing 20 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.(For Kitchen equipments)	Pt.	9	1,776.27	15,986.44
1.2.5	Supplying and fixing 125 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.(For Kitchen equipments-Dishwasher)	Pt.	1	15,892.37	15,892.37
1.2.6	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A, "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Pt.	9	3,203.39	28,830.51

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.2.6	Supplying and fixing 63 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 63 A, "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Pt.	2	1,561.02	3,122.03
1.3	FIRST FLOOR:				
1.3.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	140.00	753.39	1,05,474.58
1.3.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	102.00	486.44	49,616.95
1.3.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	550	175.42	96,483.05
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	215	153.39	32,978.81
iii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	970	210.17	2,03,864.41
iv)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	680	261.86	1,78,067.80
1.3.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
i)	6A Switch	Nos	119	88.98	10,588.98
ii)	16A Switch	Nos	68	138.98	9,450.85
iii)	6A Socket	Nos	119	116.95	13,916.95
iv)	6-16A Socket	Nos	68	183.90	12,505.08
1.3.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
i)	2 Module	Nos	12	255.08	3,061.02
ii)	3 Module	Nos	69	280.51	19,355.08
iii)	4 Module	Nos	61	301.69	18,403.39
iv)	6 Module	Nos	119	350.00	41,650.00
v)	8 Module	Nos	2	402.54	805.08
vi)	12 Module	Nos	6	455.93	2,735.59
vii)	18 Module	Nos	2	607.63	1,215.25
1.3	SECOND FLOOR:				
1.3.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	192.00	753.39	1,44,650.85
1.3.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	126.00	486.44	61,291.53
1.3.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	810	175.42	1,42,093.22
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	1100	153.39	1,68,728.81
iii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	1775	210.17	3,73,050.85
iv)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	1460	261.86	3,82,322.03
1.3.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
i)	6A Switch	Nos	250	88.98	22,245.76
ii)	16A Switch	Nos	147	138.98	20,430.51
iii)	6A Socket	Nos	250	116.95	29,237.29

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
iv)	6-16A Socket	Nos	147	183.90	27,033.05
1.3.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
i)	2 Module	Nos	8	255.08	2,040.68
ii)	3 Module	Nos	130	280.51	36,466.10
iii)	4 Module	Nos	123	301.69	37,108.47
iv)	6 Module	Nos	262	350.00	91,700.00
v)	8 Module	Nos	9	402.54	3,622.88
vi)	12 Module	Nos	5	455.93	2,279.66
1.3	THIRD FLOOR:				
1.3.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	190.00	753.39	1,43,144.07
1.3.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	115.00	486.44	55,940.68
1.3.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	1210	175.42	2,12,262.71
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	770	153.39	1,18,110.17
iii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	1830	210.17	3,84,610.17
iv)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	1480	261.86	3,87,559.32
1.3.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
i)	6A Switch	Nos	260	88.98	23,135.59
ii)	16A Switch	Nos	152	138.98	21,125.42
iii)	6A Socket	Nos	260	116.95	30,406.78
iv)	6-16A Socket	Nos	152	183.90	27,952.54
1.3.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
i)	2 Module	Nos	8	255.08	2,040.68
ii)	3 Module	Nos	132	280.51	37,027.12
iii)	4 Module	Nos	128	301.69	38,616.95
iv)	6 Module	Nos	272	350.00	95,200.00
v)	8 Module	Nos	11	402.54	4,427.97
vi)	12 Module	Nos	2	455.93	911.86
1.3	FOURTH FLOOR TO SEVENTH FLOOR:				
1.3.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	768.00	753.39	5,78,603.39
1.3.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	452.00	486.44	2,19,871.19
1.3.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	5200	175.42	9,12,203.39
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	3180	153.39	4,87,779.66
iii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	7880	210.17	16,56,135.59
iv)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	6160	261.86	16,13,084.75

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.3.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
i)	6A Switch	Nos	1088	88.98	96,813.56
ii)	16A Switch	Nos	632	138.98	87,837.29
iii)	6A Socket	Nos	1088	116.95	1,27,240.68
iv)	6-16A Socket	Nos	632	183.90	1,16,223.73
1.3.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
i)	2 Module	Nos	32	255.08	8,162.71
ii)	3 Module	Nos	552	280.51	1,54,840.68
iii)	4 Module	Nos	536	301.69	1,61,708.47
iv)	6 Module	Nos	1136	350.00	3,97,600.00
v)	8 Module	Nos	46	402.54	18,516.95
1.4	EIGHTH FLOOR TO NINTH FLOOR:				
1.4.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	384.00	753.39	2,89,301.69
1.4.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	226.00	486.44	1,09,935.59
1.4.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	2330	175.42	4,08,737.29
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	1590	153.39	2,43,889.83
iii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	3940	210.17	8,28,067.80
iv)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	3080	261.86	8,06,542.37
1.4.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
		Nos			
i)	6A Switch	Nos	544	88.98	48,406.78
ii)	16A Switch	Nos	316	138.98	43,918.64
iii)	6A Socket	Nos	544	116.95	63,620.34
iv)	6-16A Socket	Nos	316	183.90	58,111.86
1.4.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
i)	2 Module	Nos	28	255.08	7,142.37
ii)	3 Module	Nos	276	280.51	77,420.34
iii)	4 Module	Nos	268	301.69	80,854.24
iv)	6 Module	Nos	568	350.00	1,98,800.00
v)	8 Module	Nos	10	402.54	4,025.42
1.5	TERRACE:				
1.5.1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	35.00	753.39	26,368.64
1.5.2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ with 1.5 sq. mm FRLS PVC insulated copper conductor single recessed PVC conduit, and earthing the point core cable etc. as required.	Point	51.00	486.44	24,808.47
1.5.3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
i)	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	500	175.42	87,711.86
ii)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Rmt	50	153.39	7,669.49

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
iii)	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	340	210.17	71,457.63
1.5.4	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
i)	6A Switch	Nos	12	88.98	1,067.80
ii)	16A Switch	Nos	72	138.98	10,006.78
ii)	6-16A Socket	Nos	48	183.90	8,827.12
1.5.5	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
i)	3 Module	Nos	36	280.51	10,098.31
2.0	TELEPHONE WIRING				
	Point wiring with 4 pair 0.50 sq mm wire in 25-40mm dia rigid FR-PVC conduit (HMS variety - ISI marked conforming to IS 9537 Part-III) concealed in slab/ wall or surface with 5mm thick GI spacer & 20 SWG GI saddle fixed with nylon plug, wood screws etc. complete with all conduit accessories suitable MS pull boxes of suitable sizes as per site condition wherever required MS telephone point accessories boxes fabricated out of min 16 SWG thick CRCA sheet zinc chromate passivated, brass earthing studs 1/2 nos., RJ-11 modular type telephone socket outlets with shutter ferrule numbers on both side of the circuits all terminations with ferrule/lugs if required, labeling as per instructions of E.I.C. Scope includes laying of cable tray as needed for proper installation of the system.				
	Note:-Mode of measurement shall be as per point/per device basis as applicable.The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
	1. Point wiring means 4 pair 0.50 sq mm wires from telephone tag block on floor to assigned point including end termination of one pair at both sides and other pairs should be bundled & kept spare.				
	2. GA drawings & fabrication drawing are to got approved from E.I.C.				
	3.Mode of measurement shall be as per point/per device basis as applicable.The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
2.1	Supply, installation, testing & commissioning of single Telephone outlet RJ 11 Shutter type with Modular plate its metal boxes boxes and accessories as required.	Nos	34	271.19	9,220.34
2.2	2 pair unarmoured cable for telephone socket outlets laid through raceways/conduits/floor trunks etc including terminations on both ends. (Rates of raceways/conduits/floor trunks shall be excluded)	Rmt	630	21.19	13,347.46
2.3	Supply and Installation of following sizes HMS FRLS PVC conduit embedded or surface mounted as called for by owners representative, including cost of junction boxes, bends, elbows, sockets, tees etc. laying in slab, cutting chasis and making good wherever called for or surface mounted including all fixing hardware as per specification.				
a)	25 mm dia 2mm thick PVC Conduits	Rmt	79	203.39	16,067.80
2.4	Supply, installation, testing & commissioning of following Krone connector telephone tag block box, 16 SWG MS CRCA sheet, concealed/ surface mounted on MS frame of size 40x40x5mm and grouted on the wall. Fixed on the column free standing type with anchor fasteners, cable end/wire way box with adequate space facility to be provided in the TTB, with front operable hinged door, cam type locking arrangement,etc and as per specification, drawing & instructions of E.I.C.				
	Note:				
	1. Point distribution diagram shall be put inside the DB with ploythene protective cover				
	2. All fabrication drawings shall be got approved.				
	3.Final coat of painting shall be done at site after installation if required.				
	4. Disconnection module shall be Krone Part No. 69011006-02 or equivalent approved.				
a)	10 pair tag box	sets	3	2,584.75	7,754.24
	A set consisting of				
	1. Disconnection module 2/10 - 1 no.				
	2. Back mounting frame - 2/11 - 21no. (CT box with mounting bracket)				
	3. Transparent dust cover - 1 no.				
	(complete with all accessories)				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	4. Label Holder - 1 no.				
a)	20 pair tag box	sets	4	4,025.42	16,101.69
	A set consisting of				
	1. Disconnection module 2/10 - 2no.				
	2. Back mounting frame - 2/11 - 2 no.				
	(CT box with mounting bracket)				
	3. Transparent dust cover - 1 no.				
	(complete with all accessories)				
	4. Label Holder - 1 no.				
2.5	1 Nos. of 100 pair tag box in MS box 450x450x150mm deep made of minimum 16 SWG thick CRCA sheet with knock outs & front door with concealed hinges, locking arrangements complete with name plate, painting, jumper cable for connection between the 160 pair tag boxes as per instruction of E.I.C	sets	1	9,745.76	9,745.76
	Each 100 pair tag box set consisting of				
	1. Disconnection module 2/10 - 16 no.				
	2. Back mounting frame - 2/11 - 16 no.				
	(CT box with mounting bracket)				
	3. Transparent dust cover - 1 no.				
	(complete with all accessories)				
	4. Label Holder - 1 no.				
2.6	Telephone Cables & end joints				
	Supply, installation, testing & commissioning of telephone cable with copper conductor, PE insulated, cores twisted, GI wire/ strip armoured, PVC sheathed cable fixed on wall/ column/ slab pn 5mm thick GI spacer/ MS flat support fixed with wood screws with 20 SWG GI saddle etc all fixing accessories ans as directed by E.I.C.				
a)	0.5mm dia 20 pair telephone cable	Rmt.	340	364.41	1,23,898.31
b)	0.5mm dia 10 pair telephone cable	Rmt.	210	211.86	44,491.53
2.7	End Joints including all accessories, clamps/ button tapes, etc complete including all joining materials and with necessary special tool kit for KRONE type connector and as directed by E.I.C				
a)	20 pair telephone cable	No.	8	4,165.25	33,322.03
b)	10 pair telephone cable	No.	6	2,574.58	15,447.46
3.0	LAN AND WI-FI NETWORK SYSTEM				
	Supply, installation, testing & commissioning of LAN/Wi-Fi system comprising of passive components like CAT-6 UTP or improved data cable, patch panels,racks with wire manager ,flexible G.I pipe, PVC Conduit HMS variety conforming to IS 9537 Part - III, etc complete with labeling/identification on the cable ,patch panels etc required as per standards, drawings, specifications and instructions of E-I-C.				
	Note:				
	1. Evaluation of the proposed agency to execute the LAN work shall be carried out separately by the department.				
	2. Active components ie switches etc are not in the scope of the agency and shall be executed by the users separately. Agency shall extend full co-operation to the agency/ users executing the balance work which is not in the scope of the tender.				
	3. Scope includes termination of cables at both ends with all accessories and installation/ mounting of 19" racks with all accessories like angle iron frame work etc without any extra cost to the deparment. (for both LAN & Wi-Fi points)				
	4. All LAN passive components shall be of same make.				
	5. Wi-Fi Routers shall be provided by IIT.				
	6.Mode of measurement shall be as per point/per device basis as applicable.The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
3.1	Supply, Installation, Testing and Commissioning of UTP, Category6 Cable, PVC, TIA/EIA 568.C.2 23 AWG solid bare copper with CM rated, UL Listed, ETL verified with Star Filler (No Bi-sector Tape) (for Data & Wifi)	Rmt	23000	47.46	10,91,525.42
3.2	Supply and Installation of 25mm dia. HMS FRLS PVC conduit embedded or surface mounted as per drawing & specifications, including cost of junction boxes, bends, elbows, sockets, tees etc. laying in slab, cutting chasis and making good wherever called for or surface mounted including all fixing hardware as per specification.	Rmt	13000	203.39	26,44,067.80

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
3.3	Supply, Installation, Testing and Commissioning of UTP, Category6 Information outlet (RJ45) with in-built shutter for protection from Dust for Data points workstation end in Yellow colour	No.	1159	254.24	2,94,661.02
3.4	Supply, Installation, Testing and Commissioning of 1 port Faceplate for Data and Wi-Fi points to fix Cat6 Information outlet	No.	1159	144.07	1,66,974.58
3.5	Supply, Installation, Testing and Commissioning of local Back box required to mount face plate	No.	1159	262.71	3,04,483.05
3.6	Supply, Installation, Testing and Commissioning of UTP, Category6 24port Unloaded patch panel to accommodate Cat6 UTP information outlet (RJ45) for Data points	No.	54	2,025.42	1,09,372.88
3.7	Supply, Installation, Testing and Commissioning of UTP, Category6 48 Port Unloaded patch panel to accommodate Cat6 UTP information outlet (RJ45) for Data	No.	2	5,711.86	11,423.73
3.8	Supply, Installation, Testing and Commissioning of UTP, Category6 LSZH Patch cord, 1 Mtr Yellow colour for Data Patch panel end	No.	1159	261.86	3,03,500.85
3.9	Supply, Installation, Testing and Commissioning of UTP, Category6 LSZH Patch cord, 2 Mtr Yellow colour for Data Workstation end	No.	1159	292.37	3,38,860.17
3.10	Supply, Installation, Testing and Commissioning of 6 Core Indoor 50/125 Multimode OM3- LSZH Unitube Fiber Cable.	Per Device	54	292.37	15,788.14
3.11	Supply, Installation, Testing and Commissioning of 6 port LIU loaded with SC Duplex- ADAPTOR	No.	54	12,542.37	6,77,288.14
3.12	Supply, Installation, Testing and Commissioning of 24 port LIU loaded with SC Duplex- ADAPTOR	No.	2	21,816.95	43,633.90
3.13	Supply, Installation, Testing and Commissioning of SC pigtail, OM3, 50/125, 900 Micron, 1.5 Mtrs.	No.	228	542.37	1,23,661.02
3.14	Supply, Installation, Testing and Commissioning of SC-LC, Duplex patch cord, 3 Mtrs. OM3 50/125	No.	84	1,610.17	1,35,254.24
3.15	Supply, Installation, Testing and Commissioning of 6U Rack.	No.	54	6,758.31	3,64,948.47
3.16	Supply, Installation, Testing and Commissioning of 42U Rack in Server Room at Ground Floor.	No.	1	39,483.05	39,483.05
D	TOTAL OF SECTION D				2,47,99,387.46
E	Light fixtures and fittings, Ceiling fans, Exhaust fans etc				
1.0	Light Fixtures, fittings & lamps:				
	Supply, installation, testing & commissioning of fixtures & fittings, ceiling fans, exhaust fans, etc. complete with accessories, tube/lamp etc in on surface of slab/beam by 2 nos (minimum) of 6 mm anchor fasteners or on wall with 2 nos of wood screws, nylon plug etc., suitable supporting frame fixed with rag bolts grouted on the wall/anchor fastener on the beam/on the column & other fixing accessories etc provision & connection with 1.5 sq.mm multistranded copper conductor FRLS PVC wires etc., all as per drawing, specifications & as per the instruction of E.I.C.				
	Note:				
	1) Sample fixture/fittings/lamps shall be got approved from Department and Architects with complete technical data.				
	2) Cost of lamps to be included in installation rate.				
	3) All fixtures shall be with low loss electronic ballast				
1.1	Surface mounted 20 W aluminium Batten, with CRI>80, Metal construction for batter heat dissipation, IP20, Input Voltage-160-240VAC, LED	No.	2493	656.78	16,37,351.69
	Location :-Staircases,Dining area(waste bin),All office bearers rooms,Cafeteria Kitchen,Dining Kitchen,Typical Rooms,Differently abled Double rooms,Fan Room,Council Room, TV Rooms, Music room & , Reading Room, Common Toilets.				
1.2	Surface mounted 10 W aluminium Batten, with CRI>80, Metal construction for batter heat dissipation, IP20, Input Voltage-160-240VAC, LED	No.	438	527.97	2,31,249.15
	Location :-Toilets at Ground and first floor ,Differently abled doubleRoom toilet,Common Toilet,Electrical & ELV Shaft.				
1.3	Recessed downlighter-LED- 32W - light fixture & lamp.	No.	40	2,604.24	1,04,169.49
	Location :-Double height Entrance lobby				
1.4	Recessed downlighter-LED- 15W - light fixture & lamp.	No.	419	1,020.34	4,27,522.03

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	Location :-Single height Reception & waiting area , Gymnasium, Cafeteria				
1.5	Pendent light-LED- 70-80W - Decorative light fixture High power light	No.	38	7,061.86	2,68,350.85
	Location :- At main entry plinth area and entries in courtyard.				
1.6	Footlight - 1 X 9W LED fixture & lamp.	No.	5	2,487.29	12,436.44
	Location :- Differently abled double rooms				
1.7	Flood light - 1X250W fixture & lamp.	No.	8	13,313.56	1,06,508.47
	Location :-Open Sky Landscape Courtyard.				
1.8	LED Bulkhead 18W LED IP 65 fixture & lamp.	No.	71	961.86	68,292.37
	Location :-Staircase exits,Lift Well				
1.9	Hood light 18W	No.	8	1,290.68	10,325.42
	Location :-External Area				
1.1	Terrace Wall light15W	No.	68	1,102.54	74,972.88
	Location :-Terrace Area				
2.00	Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CMM/W) minimum 6.85, Air delivery minimum 215 CMM, 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, regulator unit for speed control mounted on the switch board and manually operated and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required.	No.	1366	2,825.42	38,59,528.81
3	Supply, installation, testing of Exhaust Fan, single phase complete with blades, motor, scope includes supply of 3C copper 1.5 sq. mm. flexible chord of suitable length with 6A 3 pin plug top, aluminum louvers shutters, rag bolt/ anchor fastener suitable MS angle iron frame made of 30x30x5mm, 4 corners converged with 2mm thick MS sheet to form suitable circular opening with necessary fixing arrangement painting as per specification, drawing and as directed by E.I.C				
3.1	300mm dia, 900 rpm	No.	230	2,057.63	4,73,254.24
E	TOTAL OF SECTION E				72,73,961.86
F	Lightning Protection System				
1	Supply of 8 mm Aluminum Round Conductor complete as specified in drawing & Meets the requirements of DIN EN 50164-2 (VDE 0185 part 202) & VDE 0185-305 (IS/IEC 62305)	Mtr	900	172.88	1,55,593.22
2	Providing of cross universal connector: For T and cross connection, to route vertical down conductor /mesh formation made of hot dipped galvanised iron with necessary screws etc as required. Installed with 4 hexagonal bolts M8*25 with M8 hexagonal nuts	Nos	32	339.83	10,874.58
3	Supply of Roof conductor holder for parapet- Polyamide Conductor holder: With M8 female thread or diameter 7mm, M8 Screw to connect the conductor holder. Weather and temperature resistant from -35 to +90 degree Celsius tested. Conductor holder @ 1 meter distance	Nos	857	59.32	50,838.98
4	Polyamide roof cable holder for flat roof: DIN 48829 Form B1. Closed form with bottom. Filling weight 1Kg (frost-resistant concrete). Sleeve from polyethylene, black @ 1 meter distance.	Nos	43	232.20	9,984.75
5	Providing of expansion piece with connector: For equalising temperature related length changes. Necessary on conductors length over 20 meters. For round conductor Rd 8/ALU	Nos	20	334.75	6,694.92
6	Vertical air terminal with accessories:Providing of Air terminals as per IS-IEC -62305 part-3 10 mm aluminium rod : Meets the technical specification according to DIN EN 50164-2 (VDE 0815 part 202). Meets the requirement of VDE0185/305(IS/IEC 62305) 4 Mtr Airterminal: semi-hard (E-AIMgSiO5 corresponds to DIN 48801) Suitable for high wind load.	Nos	6	4,456.78	26,740.68
7	Supply of 1 mtr vertical air terminal with mounting accessories on the flat surface to meet the requirements of IS/IEC 62305. Tested for Electrical , mechanical and chemical as per IEC 62561.	Nos	6	1,355.08	8,130.51
8	Lightnig counter - To count no of lightning strike & it can record the date and time of the lightning incident also tested as per IEC 62561-6.	Nos	1	61,791.53	61,791.53

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
9	Supply of Galvanised Steel Flat 30X3 mm thickness from earth electrode directly in ground as required. Flat conductor shall be of Hot Dipped & Cross sectional area of 90mm square According to DIN EN 50164-2 (VDE 0185 part 202) Meets the requirement of VDE0185/305(IS-IEC 62305) Zinc coating: 500 g/m square (Approx :70 micron coating) Should be tested and used exclusively for lightning protection earthing system and ring equipotential bonding.	Mtr	380	409.32	1,55,542.37
10	Supply of UL Listed maintenance free ,Low carbon copper coated earth rod of 3 metre electrode having diameter of 14.2 mm with copper coating thickness of 250micron tested as per IEC 62561-2 & is provided with universal clamp made of SS to connect rod with flat conductor. Earth conductivity enhancing mineral compound shall be of 25 kg/pit tested as per IEC 62561-7,TCLP tested. The above arrangements shall be provided with Heavy duty earth champer of 5000kg load bearing capacity to ensure the safety of earthing system.	Nos	14	10,875.42	1,52,255.93
F	TOTAL OF SECTION F				6,38,447.46
G	Earthing System				
	Supply, installation, testing & commissioning of earthing system & associated accessories, etc. complete all as per the instructions of E.I.C.				
	Note :				
	1) Measurements of resistance of each earth station & resistance of complete scheme of earthing layout must be measured recorded & got approved by E.I.C.				
	2) Jointing of the earth strip shall be with brass nuts bolts and also with solder joints.				
	3) Jointing of the earth wire shall be with solder joints with tinned cable sockets				
1.1	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	Set	18	10,094.86	1,81,707.56
1.2	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	Set	16	4,404.63	70,474.03
1.3	Supply & Laying Tinned copper earth wire/earth strip fixed on wall/side of trench/slab /column /beam/ shaft connection to panel/DBs/SFU's etc. with 5mm. Thick G.I. Spacers & 2mm thick G.I. Saddle				
i.	25 x 5 mm thick Copper Strip.	Rmt.	187	1,266.95	2,36,919.49
ii.	16Sgmm Copper wire.	Rmt.	88	253.39	22,298.31
iii.	75 x 10 mm thick GI Strip.	Rmt.	528	716.10	3,78,101.69
iv.	50 x 6 mm thick GI Strip.	Rmt.	2400	296.61	7,11,864.41
v.	25 x 5 mm thick GI Strip.	Rmt.	187	216.52	40,489.89
vi.	6 SWG Copper wire.	Rmt.	2400	84.75	2,03,389.83
vii.	6 SWG GI wire.	Rmt.	1300	38.89	50,557.18
1.4	Providing and fixing earth bus of 1metre long 50 mm X 5 mm copper strip with 8nos tapping holes mounted on insulators & enclosed in metal enclosurewith all accessories etc. as required.	Nos	2	3,203.39	6,406.78
1.5	Providing and fixing earth bus of 1metre long 50 mm X 5 mm GI strip with 8nos tapping holes mounted on insulators & enclosed in metal enclosurewith all accessories etc. as required.	Nos	2	3,203.39	6,406.78
G	TOTAL OF SECTION G				19,08,615.94
H	UPS System				
1	30 KVA UPS with isolation transformer & Maintenance Bypass switch				
1.1	Supplying, erecting, testing and commissioning of three-phase continuous duty, on-line, double conversion, solid-state IGBT based 30KVA UPS 3 PHASE INPUT & 3 PHASE OUTPUT with reversal protection, Nominal Voltage 415 V AC (3 Ph + N), +/- 15% Frequency 50 Hz Power Factor - 0.99 IGBT Technology. UPS shall be supplied with and neccessary hardwares, accessories complete	Set	2	7,21,152.54	14,42,305.08
	Battery Bank for 30 minutes Back up				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.2	Supply, Installation, Testing & Commissioning of Battery bank of SMF batteries Rocket / Amco / Exide for 30 mins Total Backup time and supply custom made MS rack to suit UPS room, battery connecting cables etc.				
H	TOTAL OF SECTION H				14,42,305.08
PART II	LOW VOLTAGE SYSTEM				
	GENERAL NOTES				
	All items of work under this Contract shall be executed strictly to fulfill the requirements laid down under "Basis of Design" in the specifications. Type of equipment, material specification, methods of installation and testing and type of control shall be in accordance with the specifications, approved shop drawings and the relevant Indian Standards, however capacity of each component and their quantities shall be such as to fulfill the above mentioned requirement.				
	The rate for each item of work included in the Schedule of Quantities shall, unless expressly stated otherwise, include cost of :				
	All materials, fixing materials, accessories, appliances tools, plants, equipment, transport, labour and incidentals required in preparation for and in the full and entire execution, testing, balancing, commissioning and completion of work called for in the item and as per Specifications and Drawings.				
	Wastage on materials and labour.				
	Loading, transporting, unloading, handling/double handling, hoisting to all levels, setting, fitting and fixing in position, protecting, disposal of debris and all other labour necessary in and for the full and entire execution and for the job in accordance with the contract documents, good practice and recognize principles.				
	Liabilities, obligations and risks arising out of Conditions of Contract.				
	All requirements of Specifications, whether such requirements are mentioned in the item or not. The Specifications and Drawings where available, are to be read as complimentary to and part of the Schedule of Quantities and any work called for in one shall be taken as required for all.				
	In the event of conflict between Schedule of Quantities and other documents including the Specifications, the most stringent shall apply. The interpretation of the Architect / Engineer shall be final and binding.				
	All equipments, quantities and technical data indicated in this Schedule are for the Contractor's guidance only, these are based on the documents prepared by the Services Consultant. This schedule must be read in conjunction with other documents. The Contractor shall be paid for the actual quantity of work executed by him in accordance with the approved Shop Drawings at the contract rates.				
	This Schedule shall be fully priced and the extensions and totals duly checked. The rates for all items shall be filled in INK including NIL items.				
	No alteration whatsoever is to be made to the text or quantities of this Schedule unless such alteration is authorised in writing by Services Consultant. Any such alterations, notes or additions shall, unless authorized in writing, be disregarded when tender documents are considered.				
	In the event of an error occurring in the amount of the Schedule, as a result of wrong extension of the unit rate and quantity, the unit rate quoted by the tenderer shall be regarded as firm and the extensions shall be amended on the basis of rates.				
	Any error in totaling in the amount column and in carrying forward total shall be corrected. Any error, in description or in quantity, omission of items from this Schedule shall not vitiate this Contract but shall be corrected and deemed to be variation required by the Services Consultant/Project Manager.				
	The Contractor shall procure and bring Materials/Equipment to the site only on the basis of drawings approved for construction and shop drawings and not on the basis of Schedule of Quantities which are approximate only. This also applies to the Contractor's requisition for Owner supplied materials.				
	The unit rate for all local equipment or materials (not being procured against duty benefit) in Indian Rupees shall include cost of equipment and materials including all taxes and duties and also including forwarding, freight, insurance and transport into Contractor's store at site, storage, installation, testing, balancing, commissioning and other works required.				
	The rates for item being procured against duty benefit shall be quoted under following heads.				
A	ADDRESSABLE FIRE ALARM SYSTEM				
1	SITC of the following equipment for FAS				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.1	Supplying, installing, testing and commissioning of Microprocessor based 10 loop capacity expandable upto 20 loop, Networkable analogue addressable type fire alarm control panel with 640 character LCD display, each loop shall have a minimum capacity of 150 detectors & 150 devices analog in one loop. The panel shall have integrated QWERTY Keypad, 4000 History logging event, Four access levels, capable of taking Flash Scan devices, flash EPROM, sufficient numbers of programmable relay controls for controlling AHUs, pressurization fans, ventilation fans at fire pump room, monitoring of fire sprinkler and fire hydrant pump, The Panel shall have BACKNET CARD/MODBUS CARD for integration with BMS. 240 volts AC power supply, automatic supervised battery charger, 24 volts sealed lead acid batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 Minutes in emergency conditions as required.(UL 9th addition & FM approved) (Location - CONTROL/SECURITY ROOM)	No.	1	8,50,000.00	8,50,000.00
1.2	Addressable Monitor modules monitor status like flow Switch,Tamper Switch in Fire fighting and other applications as per specifications	No.	60	2,542.37	1,52,542.37
1.3	Adressable Control modules For Elevator recall, Fans Tripping as per specification	No.	60	3,313.56	1,98,813.56
1.4	Intelligent addressable rate of rise cum fixed temperature heat detector with mounting base, LED, address switch complete as per specifications	No.	25	3,108.47	77,711.86
1.5	Intelligent addressable type Multicriteria type detectors as per specifications.	No.	11	3,207.63	35,283.90
1.6	Addressable type manual break glass unit as per specifications	No.	60	4,055.93	2,43,355.93
1.7	Surface mounted addressable type fully solid state circuitory dual tone Electronic loud speaker type hooters with strobe lights of 110 Cd intensity as per specifications	No.	60	3,672.88	2,20,372.88
1.8	Addressable Fault Isolation Module as per specifications	No.	91	3,423.73	3,11,559.32
1.9	Addressable Relay interface Module as per specifications	No.	1	3,313.56	3,313.56
1.10	Gas Detector for Kitchen area	No.	10	2,627.12	26,271.19
1.11	Intelligent addressable type Smoke detectors as per specifications.	No.	1637	2,966.10	48,55,508.47
1.12	Supply, installation, connecting, testing and commissioning of UL listed addressable Active Repeater panel.	No.	1	1,14,118.64	1,14,118.64
2.00	Supply & laying of following grade with copper conductor armoured FIRE SURVIVAL cable with (EPR) Ethylene Propylene rubber insulation as per IEC-60502:2004 Part-1 (Armoured), Retain circuit integrity as per BS 6387 C.W.Z (armoured), BS 8434-2: 2009 (armoured), (Resistance to fire at 950° C for 3 hours), as per specifications in cable trays, clamped including anchor fastners to wall with suitable clamps, saddles fixing bolts, 2 Nos. of cable glands for each detector back box, complete in all respect as required as per specifications.(Red Colour)				
2.10	2 Core x 1.5 sq. mm	RM	11000	344.92	37,94,067.80
3.00	Supply, laying, testing and commisioning of 25 mm dia Rigid FRLS HMS PVC conduit in wall/ceiling/concealed manner.	RM	10000	66.95	6,69,491.53
A	TOTAL OF SECTION A				1,15,52,411.02
B	PUBLIC ADDRESS SYSTEM				
1	Supplying, Installing, Testing & Commissioning of the Public Address system consisting of the following:				
1.1	Supply, installation, Testing & Commisioning of 16 zone Standalone Voice Alarm Controller with LCD display, Its comes along with 8zone Paging system with pre-recorded messages for voice evacuation. It should have functions like the audio playing, zone control etc. Controller shall have additional ports for BMS integration. The Voice alarm controller should also have the following functions: . Built in Loud speaker . 1Line input . 1Microphone input . Built in 240W Power Amplifier . Provide 8broadcast ZONE function, peak power for is zone is 500Watts, total wattage of all the 8zone is 1000Watts . 1 trigger inputs/ Fire outputs	Set	1	1,03,538.14	1,03,538.14

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.2	Supply, installation, Testing & Commissioning of 16 Zone Voice Alarm Router for connecting additional 6 Zones in Voice alarm controller.	Set	1	91,525.42	91,525.42
1.3	Supplying, Installation, Testing & Commissioning 3"/ 6 watt ceiling complete Metal speaker with metal grill recessed speaker with line matching transformer, Effective frequency range 70-15,000Hz , SPL@1m/1W=83dB, 180 deg disperion, snap on spring mounting, complete with necessary mounting hardware & accesories.	Nos.	268	1,871.19	5,01,477.97
1.4	Supply, Testing and assembling of 6W Wall Mount Speaker: This is full range loudspeaker are suitable for both music and music reproduction in all public address application. It has durable & reliable technology	Nos.	10	1,871.19	18,711.86
1.5	Supply, installation, testing and commissioning of 16 zone microphone with	Nos.	1	10,583.05	10,583.05
1.6	Supply, installation, testing & commissioning of Rack Mount Booster Amplifiers (500W) with all required accessories etc., complete as per directions of Engineer In charge.	Nos.	4	27,024.58	1,08,098.31
2.0	Supply and laying of the 2c X 1.5 sq mm coper, stranded, shieded cable in provide PVC Conduit.	Mtrs.	4500	53.39	2,40,254.24
3.0	Supply, laying, testing and commissioning of 25 mm dia Rigid HMS FRLS PVC medium duty conduit.	Mtrs.	4000	66.95	2,67,796.61
4.0	Supply, Installation, Testing & Commissioning of Background music source CD/DVD, AM-FM Tuner	Nos.	1	5,508.47	5,508.47
5.0	Supply, installation, testing & commissioning of 27U prewired rack with provision to mount controller,amplifier, mains panel with front glass door , rear door field terminations on rear side duly wired, with all required accessories etc..., complete as per directions of Engineer In charge.	Nos.	1	30,549.15	30,549.15
TOTAL OF SECTION B					13,78,043.22
C	IP BASED CCTV SYSTEM (ONLY WIRING)				
1	Supply & laying of the Cat 6 UTP cable for the CCTV system in provided 25mm dia rigid FR PVC HMS conduit or channel.	Rmt	6500	51.69	3,36,016.95
2	Supply and Installation of following sizes HMS FRLS PVC conduit embedded or surface mounted as called for by owners representantive, including cost of junction boxes, bends, elbows, sockets, tees etc. laying in slab, cutting chasis and making good wherever called for or surface mounted including all fixing hardware as per specification.				
i)	25 mm dia 2mm thick PVC Conduits	Mtrs.	6000	66.95	4,01,694.92
C	TOTAL OF SECTION C				7,37,711.86
D	CABLE TV SYSTEM				
	Note:-Mode of measurement shall be as per point/per device basis as applicable.The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
1	Supply,installation,testing and commissioning of socket outlet for TV.	pts.	6	135.59	813.56
2	Supply, laying, connection & testing of RG 6 cable for TV wiring from splitter to socket outlet in 25mm dia. Rigid FRLS PVC HMS conduit / channel.	Rmt	85	34.75	2,953.39
3	Supply,installation,connection & testing of 4 way Splitter with all necessary accessories to complete the job.	pts.	3	434.75	1,304.24
4	Supply, laying, connection & testing of RG 11 cable for TV wiring running in shaft vertically in 25mm dia. Rigid FRLS PVC HMS conduit / channel.	Rmt	165	55.08	9,088.98
5	Supply and Installation of following sizes HMS FRLS PVC conduit embedded or surface mounted as called for by owners representantive, including cost of junction boxes, bends, elbows, sockets, tees etc. laying in slab, cutting chasis and making good wherever called for or surface mounted including all fixing hardware as per specification.				
i)	25 mm dia 2mm thick PVC Conduits	Mtrs.	250	66.95	16,737.29
D	TOTAL OF SECTION D				30,897.46

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
E	ACCESS CONTROL SYSTEM				
	Note:-Mode of measurement shall be as per point/per device basis as applicable.The extent of wires/cables required will be as per the dimensional details available in the respective drawings.				
	(Bidder shall submit execution drawings prior to execution for approval to Consultants)				
1	S.I.T.C of Electro Magnetic Lock (600 Lbs) with magnetic contact				
	(a)Single leaf	No.	2	2,118.64	4,237.29
2	S.I.T.C of stand alone type Biometric reader.(employee capacity:100) (For ELV & UPS Room at First Floor)	No.	2	22,372.88	44,745.76
	Cost shall include the necessary software & accessories to complete the job.				
3	Supply & laying of the 8cx1.5sqmm cable for the access control system in 25mm dia rigid FRLS PVC HMS conduit or channel.	Rmt	30	139.83	4,194.92
4	6 A socket outlet point near controller with 6A, 240 V SP switch and wired with 2 no's of 1.5 sq.mm wires and 2.5 sq.mm insulated earth wire from main switch board upto the socket outlet as per specification.	Pt.	2	423.73	847.46
5	S.I.T.C of Push button exit switch(Modular type.)	No.	2	1,271.19	2,542.37
E	TOTAL OF SECTION E				56,567.80
PART-III	FIREFIGHTING SYSTEM				
A	FIRE PUMPS & RELATED EQUIPMENT / ACCESSORIES				
1.0	STANDBY DIESEL ENGINE PUMP				
	Supplying, installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation, capable to deliver 2850 LPM at 88 mtr Head and consisting of following, complete in all respects, as required :	Nos.	1	7,11,407.63	7,11,407.63
	Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.				
	Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12 /24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required.				
	M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required.				
	Suitable cement concrete foundation duly plastered and with anti vibration pads.				
	Note: *The head of the pump is selected in a manner so as to give a minimum 3.5kgf/cm2 pressure at the highest/farthest point.				
2.0	JOCKEY PUMP				
	Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation, capable to deliver 180 LPM at 88 mtr Head and consisting of following, complete in all respects, as required :	Nos.	2		2,62,911.86
	Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520.				
	Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325.			1,31,455.93	
	M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required.				
	Suitable cement concrete foundation duly plastered and with anti vibration pads.				
3.0	MAIN HYDRANT / SPRINKLER PUMP				
	Supplying, installation, testing and commissioning of Electric driven Main Fire Hydrant / Sprinkler Pump suitable for automatic operation, capable to deliver 2850 LPM at 88 mtr Head and consisting of following, complete in all respects, as required :	Nos.	2		9,38,784.75
	(a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520.				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
	(b) Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class 'F' insulation, conforming to IS-325.			4,69,392.37	
	(c) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.				
	(d) Suitable cement concrete foundation duly plastered with anti vibration pads.				
	Note: *The head of the pump is selected in a manner so as to give a minimum 3.5kgf/cm2 pressure at the highest/farthest point.				
4.0	TERRACE BOOSTER PUMP				
	Supplying, installation, testing and commissioning of electric driven terrace Booster pump suitable for automatic operation, capable to deliver 900 LPM at 35 mtr Head and consisting of following, complete in all respects, as required:	Nos.	12		12,61,444.07
	(a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical confirming to IS : 1520			1,05,120.34	
	b) Suitable HP squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.				
	(c) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.				
	(d) Suitable cement concrete foundation duly plastered with anti vibration pads.				
5.0	Providing, laying, testing & commissioning of 'C' class heavy duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				
5.1	200 mm nominal dia (wall thickness = 6.3 mm)	Rmt	15	5,040.68	75,610.17
5.2	150 mm nominal dia	Rmt	20	2,362.71	47,254.24
5.3	100 mm nominal dia	Rmt	5	1,694.07	8,470.34
5.4	80 mm nominal dia	Rmt	5	1,305.08	6,525.42
5.5	65 mm nominal dia	Rmt	10	1,120.34	11,203.39
7.0	SLUICE VALVE				
	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required :				
7.1	200 mm nominal dia (On Main Suction & Discharge Header)	Nos.	2	40,751.69	81,503.39
8.0	BUTTERFLY VALVE				
	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :				
8.1	150 mm nominal dia (For Hydrant, Sprinkler & Diesel Engine Driven Pump Suction & Discharge, For Booser Pump Discharge, For External Hydrant & Sprinkler Line, For 2 Way Fire Brigade Inlet)	Nos.	28	9,058.47	2,53,637.29
8.2	100 mm nominal dia (For Booster Pump Suction Header & Test Line)	Nos.	13	6,721.19	87,375.42
8.3	65 mm nominal dia (For Hydrant & Sprinkler Jockey Pump Suction & Discharge line)	Nos.	4	4,320.34	17,281.36
9.0	Y-STRAINER				
	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.				
9.1	150 mm nominal dia (For Hydrant, Sprinkler & Diesel Engine Driven Pump Suction)	Nos.	3	11,100.00	33,300.00
9.2	100 mm nominal dia (For Booster Pump Suction)	Nos.	12	6,716.95	80,603.39
9.3	65 mm nominal dia (For Hydrant & Sprinkler Jockey Pump Suction)	Nos.	2	8,096.61	16,193.22
10.0	NON RETURN VALVE				
	Providing, installation, testing and commissioning of non-return valve of following sizes conforming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :				
10.1	200 mm nominal dia (For Discharge Header)	Nos.	1	30,277.12	30,277.12
10.2	150 mm nominal dia (For Hydrant, Sprinkler, Diesel Engine Driven, Booster Pump Discharge & For 2 Way Fire Brigade Connection)	Nos.	23	13,097.46	3,01,241.53
10.3	65 mm nominal dia (For Hydrant & Sprinkler Jockey Pump Discharge)	Nos.	2	6,533.05	13,066.10

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
11.0	PRESSURE SWITCH				
	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required. (For Each Pump Discharge Line)	Nos.	17	1,570.34	26,695.76
12.0	PRESSURE GAUGES				
	Providing, fixing including testing and commissioning 150 mm dia pressure gauge of range 250 PSI working pressure conforming to IS - 3624 having bourdon tube of stainless steel 310 in cast aluminium, stove enamelled, black, weather proof case with outer, screwed aluminium bezel and complete with necessary U-type stainless steel siphon tube and cock including providing suitably painted angle iron support to the tube etc. as per specification complete as required. (For Each Pump Discharge Line & For Sprinkler Tap off line at each floor)	Set	77	3,108.47	2,39,352.54
13.0	AIR VESSEL				
	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required.	Nos	1	18,753.39	18,753.39
14.0	INSTALLATION CONTROL VALVE				
	Providing, fixing, testing & commissioning of installation control valve of cast iron body, brass/bronze working parts comprising of water motor alarm, bronze seat clapper, clapper arm and hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc of following sizes as required :				
14.1	150 mm nominal dia	Nos.	1	49,878.81	49,878.81
15.0	Providing & fixing full way lever operated following size of forged brass ball valve of brass body with forged brass hard chrome-plated steel ball tested to a pressure not less than 16 Kg / sq.cm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.				
15.1	15 mm nominal dia	Nos.	94	556.78	52,337.29
15.2	25 mm nominal dia	Nos.	2	1,011.02	2,022.03
A	TOTAL FOR FIRE PUMP ROOM EQUIPMENT				46,27,130.51
B	INTERNAL & EXTERNAL HYDRANT SYSTEM				
1.0	Providing, laying, testing & commissioning of 'C' class heavy duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				
1.1	150 mm nominal dia (Fire Brigade Inlet Line, External Hydrant Line, External Sprinkler Line, Internal Hydrant Line & Terrace Level Booster Pump Line)	Rmt	985	2,362.71	23,27,271.19
1.2	100 mm nominal dia	Rmt	5	1,696.61	8,483.05
1.3	80 mm nominal dia (Hydrant Stand Post)	Rmt	20	1,303.39	26,067.80
2.0	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required				
2.1	2 way - 100 mm dia M.S. Pipe	Nos.	6	6,862.71	41,176.27
2.2	4 way - 150 mm dia M.S. Pipe	Nos.	1	14,393.22	14,393.22
3.0	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal/Stainless Steel coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required :				
3.1	Single headed Stainless steel	Nos.	13	6,234.75	81,051.69
4.0	Supplying and fixing Double headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :				
4.1	Double headed Stainless steel	Nos.	60	12,469.49	7,48,169.49

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
5.0	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. (a) 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type-2 as per IS: 12585. (b) 20 mm nominal internal dia gun metal globe valve & nozzle. (c) Drum and brackets for fixing the equipments on wall. (d) Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.				
5.1	40 m	Nos.	60	10,509.32	6,30,559.32
6.0	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required :				
6.1	Stainless Steel	Nos.	120	4,616.95	5,54,033.90
7.0	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required :				
7.1	Stainless Steel	Nos.	120	1,716.10	2,05,932.20
8.0	Providing and fixing 2 mm thick PVC lockable cabinet of size not less than 0.60 mtr x 0.75 mtr (height) x 0.25 mtr having central opening and 4 mm thick glazed glass doors (Two nos.) suitably marked on the outside with the letters "FIRE HOSE" including necessary locking arrangement and shall be painted with two coats red colour. The cabinet shall be suitable to accommodate 2 nos. 15 mtr long Hose pipe & 2 No branch pipe nozzle. It shall be mounted on raised Brick platform complete as required.(Cost shall be inclusive of providing break glass box containing key for the cabinet along with hammer).	Nos.	73	3,458.47	2,52,468.64
9.0	Supplying and fixing orifice plate made out of 6 mm thick stainless steel (Grade 304) with orifice of required size to be fitted between flange & landing valve of external and internal hydrants to reduce pressure at the outlet to the level of 3.5 kg/cm2 complete as required.	Nos.	73	1,344.07	98,116.95
10.0	Providing, fixing and commissioning of spring loaded air release valve : 25 mm dia suitable for pressure of 15 Kg / sq.cm including flanges, nuts, bolts, washers etc. complete as required. (For Ventical Riser Line, External Hydrant Ring & Terrace Level Ring)	Nos.	10	4,023.73	40,237.29
TOTAL FOR INTERNAL & EXTERNAL HYDRANT SYSTEM					50,27,961.02
C	AUTOMATIC SPRINKLER SYSTEM				
1.0	Providing, laying, testing & commissioning of 'C' class heavy duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :				
1.1	150 mm nominal dia	Rmt	500	2,362.71	11,81,355.93
1.2	100 mm nominal dia	Rmt	135	1,694.07	2,28,699.15
1.3	80 mm nominal dia	Rmt	560	1,303.39	7,29,898.31
1.4	65mm nominal dia	Rmt	1,045	1,120.34	11,70,754.24
1.5	50mm nominal dia	Rmt	1,115	894.92	9,97,830.51
1.6	40mm nominal dia	Rmt	550	794.92	4,37,203.39
1.7	32mm nominal dia	Rmt	260	651.69	1,69,440.68
1.8	25mm nominal dia	Rmt	4,350	577.97	25,14,152.54
2.0	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :				
2.1	100mm dia	Nos	56	6,721.19	3,76,386.44
2.2	80 mm dia	Nos	3	5,042.37	15,127.12
2.3	65 mm dia	Nos	1	4,320.34	4,320.34
3.0	Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories :				
3.1	Pendent Sprinkler	Nos	680	504.24	3,42,881.36
3.2	Side Wall Sprinkler	Nos	2,140	504.24	10,79,067.80
3.3	Concealed Sprinkler	Nos	1	1,455.08	1,455.08

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
4.0	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.				
4.1	1000mm	Nos	1	1,603.39	1,603.39
5.0	Providing, fixing, testing and commissioning of drain test assembly complete with pipe, drain valve, test valve, sight glass, union, tee, elbow etc. complete with bolts, nuts, gasket, washers etc. as per NBC and as shown in the drawing.	Nos	60	10,941.53	6,56,491.53
6.0	Providing and Fixing electrically operated water flow switches (Paddle type) including tamper switch and accessories, complete with tap off socket arrangement as required..				
6.1	100mm dia	Nos	56	5,078.81	2,84,413.56
6.2	80mm dia	Nos	3	4,067.80	12,203.39
6.3	65mm dia	Nos	1	3,389.83	3,389.83
7.0	Providing, fixing and commissioning of spring loaded Air Release valve : 25 mm dia suitable for pressure of 15 Kg / sq.cm including flanges, nuts, bolts, washers etc. complete as required. (At the end of Fire Sprinkler line of each shaft of each floor & External Sprinkler Ring)	Nos.	62	4,023.73	2,49,471.19
8.0	Supplying and fixing orifice plate made out of 6 mm thick stainless steel (Grade 304) with orifice of required size to be fitted between flange & landing valve of external and internal hydrants to reduce pressure at the outlet to the level of 3.5 kg/cm2 complete as required.	Nos.	60	1,344.07	80,644.07
9.0	Providing & fixing full way lever operated 40 mm size of forged brass ball valve of brass body with forged brass hard chrome-plated steel ball tested to a pressure not less than 16 Kg / sq.cm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.	Nos.	60	2,277.97	1,36,677.97
C	TOTAL FOR AUTOMATIC SPRINKLER SYSTEM				1,06,73,467.80
D	FIRE EXTINGUISHERS				
1.0	Supply, installation, testing and commissioning of following types of extinguisher with provision of wall bracket (fixed with anchor fastener).				
1.1	ISI marked (IS:15683:2018) ABC type fire extinguisher of 6 Kgs. Capacity , with initial filling in brand new cylinder with powder coated finish, fitted with EPDM discharge hose, wall mounting bracket and HELIUM LEAKAGE TEST, checkable pressure gauge and fire rating of Class A:6A and B: 183B. complete, confirming to IS.	Nos.	60	2,178.81	1,30,728.81
1.2	ISI marked (IS:15683:2018) CO2 type fire extinguisher of 4.5 Kgs. Capacity , with initial filling in brand new PESE approved cylinder with powder coated finish, fitted with Castor wheel trolley. EPDM discharge hose, wall mounting bracket , used unused incator and Fire rating Class B: 55B complete, confirming to IS	Nos.	4	4,039.83	16,159.32
1.3	Galvanised mild steel Fire bucket with clean sand & stand (3 buckets for each stand) in accordance with IS 2546. Fire bucket shall have two coats of anti corrosive paint, two coats of red colour conforming to shade No. 536 or 538 of IS 5. The paint shall conform to IS 2932 on its outside & two coats of white paint on the inside. The word "FIRE" shall be clearly stencilled on it in accordance with IS 2546. Vendor to include in his quote all costs relating to mounting of the bucket at locations stated by the Fire NOC & the architect. Vendor to include in his quote all costs all accessories, consumables, fittings & rigging equipments necessary for the satisfactory installation of the same.	Nos.	4	438.14	1,752.54
D	TOTAL FOR FIRE EXTINGUISHERS				1,48,640.68
PART-IV	WATER SUPPLY PUMPS AND ACCESSORIES / EQUIPMENTS				
	WATER SUPPLY				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.0	Providing, fixing, testing and commissioning pumps of following capacity for Domestic & Flushing Water supply distribution from UGT to OHT. Pumps to be vertical / Horizontal Split casing centrifugal stainless steel pumps with suitable for operation on 415 v, 3 phase 50 Hz Ac supply. Pump head and base shall be of C.I. construction, impellers, diffusers, shaft shall be in SS 304 construction. Motor shall be squirrel cage, induction motor TEFC, operating at 2900 RPM. including Common bed plate fabricated out of MS channel of size 75 mm x 75mm x 6 mm for assembling the pump and the motor, flexible coupling and with coupling guard for protection/safety including painting etc. as required.				
1.1	Pumps with following specs of approved make .	NOS	3	81,182.20	2,43,546.61
	Water Flow Rate : 3.0 LPS each pump				
	Head : 50 M				
	Purpose : Domestic system Transfer Pump (2W+1S)				
1.2	Pumps with following specs of approved make .	NOS	3	60,217.80	1,80,653.39
	Water Flow Rate : 1.5 LPS each pump				
	Head : 50 M				
	Purpose : Flushing system Transfer Pump (2W+1S)				
2.0	Providing, fixing, testing and commissioning pumps of Submersible Pump Set with suction casing, valve housing & stage casing of stainless steel. Pump having Built-in Overload Protection, including necessary supports/ foundations, Delivery Header along with Isolation and N.R valve, Pressure Gauges & Pressure Switches, all necessary fittings, Cable from Panels to the individual pumps etc. complete as per directions of engineer in charge.				
2.1	Water Flow Rate : 1.5 LPS each pump	NOS	2	49,009.32	98,018.64
	Head : 10 M				
	Purpose : Pump Room Drainage (1W+1S)				
3.0	Providing and fixing heavy duty GI pipe C - Class for all pump suction / discharge line with common header complete with all fittings like elbow, tee, reducer, flange, union, etc. conforming to IS:1239 (Part 1) for pipes and IS : 1879 (Part 1 to 10) for fittings including fixing in wall / ceiling / floor level, supported by galvanized clamps, hangers, vertical pipe support etc including Anticorrosive Primer and Enamel paint complete etc. as required.				
3.1	Size : 40 mm dia	MTR	15	842.37	12,635.59
3.2	Size : 50 mm dia	MTR	20	1,209.32	24,186.44
3.3	Size : 65 mm dia	MTR	10	1,512.71	15,127.12
4.0	Supplying, fixing, testing and commissioning of lever operated butterfly valve (wafer type) of PN 1.6 rating with S.S. - 304 Disc, S.G. Iron body, Nitrile / EPDM Rubber lining ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required				
4.1	Size : 40 mm dia (For Dewatering Pump Discharge & Header Line, Flushing Pump Suction & Discharge Line)	NOS	9	3,023.73	27,213.56
4.2	Size : 50 mm dia (For Domestic Pump Suction & Discharge Line & Flushing Pumps Main Discharge Header Line)	NOS	7	3,565.25	24,956.78
4.3	Size : 65 mm dia (For Domestic Pumps Main Discharge Header Line)	NOS	1	3,996.61	3,996.61
5.0	Supplying, fixing, testing and commissioning of cast iron Dual plate (wafer type) check valve of PN 1.6 rating with SS- 304 Disc & Nitril rubber lining conforming to IS 5312 including rubber gasket, flanges, nuts, bolts and washers & other accessories , complete etc as required.				
5.1	Size : 40 mm dia	NOS	5	4,564.41	22,822.03
5.2	Size : 50 mm dia	NOS	3	5,168.64	15,505.93
6.0	Providing and fixing ISI mark C.I.'Y' strainer with bolted cover & trim SS 304 screen having 1.2 mm dia perforation flanges type as per BS - 10 with working pressure 10 kg /cm2 perforated sheet basket including rubber gasket, flanges, nuts, bolts and washers & other accessories , complete etc as required.				
6.1	Size : 50 mm dia (Flushing Pumps Suction Header Line)	NOS	1	5,528.81	5,528.81
6.2	Size : 65 mm dia (Domestic Pumps Suction Header Line)	NOS	1	7,538.14	7,538.14

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
7.0	Providing, fixing including testing and commissioning 100 mm dia pressure gauge of range 250 PSI working pressure conforming to IS - 3624 having bourdon tube of stainless steel 310 in cast aluminium, stove enamelled, black, weather proof case with outer, screwed aluminium bezel and complete with necessary U-type stainless steel siphon tube and cock including providing suitably painted angle iron support to the tube etc.as per specification complete as required.	NOS	7	1,572.88	11,010.17
8.0	Providing and fixing Automatic Pump Control Panel for Operation & Control of pump-sets. Pump shall start at low level signal from the sensor and stop at high level signal. Controller to switch pumps alternately for equal run time for both pumps. The contractor to consider -L.T. panel incorporating ammeter, voltmeter switches, change over switch from auto/ manual, earth leakage circuit breaker, single phase preventor, Dry running preventor, pressure switches. -Panel showing visual indications as below -Motor status On/ Off/ Fail -Level Status Low/ Medium/ High in the UGR -Power On/ Off -Contractor to submit the GA drawing along with the Control layout to the Consultants before manufacturing of the same. (FOR DOMESTIC PUMPS)	NOS	1	26,509.32	26,509.32
9.0	Providing and fixing Automatic Pump Control Panel for Operation & Control of pump-sets. Pump shall start at low level signal from the sensor and stop at high level signal. Controller to switch pumps alternately for equal run time for both pumps. The contractor to consider -L.T. panel incorporating ammeter, voltmeter switches, change over switch from auto/ manual, earth leakage circuit breaker, single phase preventor, Dry running preventor, pressure switches. -Panel showing visual indications as below -Motor status On/ Off/ Fail -Level Status Low/ Medium/ High in the UGR -Power On/ Off -Contractor to submit the GA drawing along with the Control layout to the Consultants before manufacturing of the same. (FOR FLUSHING PUMPS)	NOS	1	26,509.32	26,509.32
10.0	Providing and fixing Automatic Pump Control Panel for Operation & Control of pump-sets. Pump shall start at low level signal from the sensor and stop at high level signal. Controller to switch pumps alternately for equal run time for both pumps. The contractor to consider -L.T. panel incorporating ammeter, voltmeter switches, change over switch from auto/ manual, earth leakage circuit breaker, single phase preventor, Dry running preventor, pressure switches. -Panel showing visual indications as below -Motor status On/ Off/ Fail -Level Status Low/ Medium/ High in the UGR -Power On/ Off -Contractor to submit the GA drawing along with the Control layout to the Consultants before manufacturing of the same. (FOR DEWATERING PUMPS)	NOS	1	26,509.32	26,509.32
	GRAND TOTAL				7,72,267.80
PART-V	DINING & KITCHEN AREA VENTILATION SYSTEM				
A	VENTILATIONS FANS FOR FRESH & EXHAUST AIR APPLICATION				
1.0	FRESH AIR UNIT (AIR WASHER UNIT FOR KITCHEN AREA)				

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.1	Supplying, installing, testing and commissioning of double skin construction packaged type air washer unit comprising of fan section with floor standing DIDW centrifugal fan, TEFC squirrel cage, induction motor of IP 55 protection, multi sheave pulley mounted on motor, belt drive package wetting Pad section complete with 200 mm Thick Cellulose based Paper Fills with 'Drop-Stop' eliminators, water distribution System complete with FRP Spray Headers, Float Valve, quick fill, Overflow, water circulation pump (1W +1S), tank, drain connection along with GIB' class piping, strainers, fittings, electrical panels, belt guard, base frame & vibration isolators etc. Filter sections shall be complete with 50 mm Thick Aluminum Wire mesh Viscous metallic Filters. The fan section shall be fabricated out of 16 Gauge G.S. Sheet complete with inspection door. Wet section of Air Washer including sump shall be made out of 1.25 mm Thick SS 304 Stainless Steel sheet. (The blower motor shall be suitable for operation on 415+10 %V, 50 Hz, 3 phase power supply) etc. Necessary starter with remote operating push button at Kitchen location and power and control cabling from fan to kitchen shall be in scope of HVAC Contract. Power cable will be available up to starter panel by electrical contractor. (Kitchen Fresh Air System) Air Washer Unit to be supplied with Starter Panel				
	Air Quantity				
1.1	28000 CFM (Static Pressure - 2")	No.	1	4,74,576.27	4,74,576.27
2.0	DRY SCRUBBER (FOR KITCHEN AREA)				
2.1	Supplying, installing, testing and commissioning of double skin construction Dry scrubber unit for kitchen Exhaust. The unit shall comprise of Air intake section, DIDW Centrifugal blower suitable capacity TEFC squirrel cage, IP 55 induction motor, drive package including multi scheme pulley belts, electrical panel, vibration Isolators etc. Motor with IP 55 Protection shall be considered. The unit & its components etc shall be suitable for the outdoor installation. Necessary starter with remote operating push button at Kitchen location and power and control cabling from fan to kitchen shall be in scope of HVAC Contract. Power cable will be available up to starter panel by electrical contractor. (Kitchen Exhaust Air System). Dry Scrubber to be supplied with Starter Panel				
	Air Quantity				
2.1.1	17500 CFM . (Static Pressure - 3")	No.	1	3,05,084.75	3,05,084.75
2.1.2	15000 CFM . (Static Pressure - 3")	No.	1	2,37,288.14	2,37,288.14
3.0	EXHAUST & FRESH AIR CABINET TYPE FAN FOR DINING AREA				
3.1	Supply installation testing and commissioning of Ceiling Mounted Belt Driven DIDW Forward Curve Inclined Plug Type Exhaust / Fresh Air Cabinet type Fan Unit complete with motor for maximum speed duty point of specified CFM and Static pressure , complete with drive package comprising of V belts and Grooved pulley pair keyed to motor and fan shafts. The fan housing shall have double skin puf insulated panels to <u>reduce noise level</u> .				
	Necessary starter with remote operating push button at Kitchen location and power and control cabling from fan to kitchen shall be in scope of HVAC Contract. Power cable will be available up to starter panel by electrical contractor.				
	Air Quantity				
3.1.1	32500 CFM (Static Pressure - 2")	Nos	2	2,33,050.85	4,66,101.69
3.1.2	16000 CFM (Static Pressure - 2")	Nos	4	1,22,881.36	4,91,525.42
A	TOTAL OF SECTION A				19,74,576.27
B	SHEET METAL WORKS				
1.0	Supply /Installation/ Testing / Commissioning of Pre fabricated - Factory Fabricated Galvanised Sheet Steel of 120 GSM, Rectangular Ducting as per specification complete (as per approved make) with Tie rod supports, nut-bolts, washer, neoprene gaskets duly installed. Leak Testing of ducts at site shall be carried out as per SMACNA standard etc all complete as required				
1.1	22 G M.S. steel For Kitchen Exhaust	Sqm.	270	1,576.27	4,25,593.22

Sr. No.	Description	Unit	Qty	Rate without GST	Amount without GST
1.2	20 G galvanized sheet steel For Dining Area	Sqm.	210	1,525.42	3,20,338.98
1.3	22 G galvanized sheet steel For Dining Area	Sqm.	1250	1,398.31	17,47,881.36
1.4	24 G galvanized sheet steel For Dining Area	Sqm.	950	974.58	9,25,847.46
2.0	Providing and Fixing of Aluminum Powder Coated, Exhaust / Fresh Air grills with internally operated volume control damper of powder coated aluminum construction, the damper blades shall be black powder coated finish along with GI Plenum box and flange for duct connection etc all complete as required.	Sqm.	52	6,423.73	3,34,033.90
3.0	Supply, installation, testing and balancing of G.I volume control collar damper in accordance with the approved shop drawings and specifications .	Sqm.	5	5,508.47	27,542.37
B	TOTAL OF SECTION B				37,81,237.29

Ref: NIT No: IITB/Dean (IPS)/CACI/H-19/NIT/R1 dated 31.10.2022					
NAME OF PROJECT - Construction of Hostel No. 19 Building for 1052 students (G+9 upper Storey's) including Finishing works, Water Supply & Sanitary installations, Internal Electrical Installation & Cable laying, Firefighting system, Automatic Fire Alarm & PA System, Lifts, Mechanical Ventilation and Development Works at IIT Bombay					
Sub: SITC of passenger Elevators at Hostel 19, IIT Bombay					
Sr. No	Description	Qty	Rate (without GST)	Unit	Amount (without GST)
1	Design,manufacture, supply,erect at site,test,commission and maintain(During the guarantee period of two years including periodical servicing during guarantee period) passenger lift (machine room) with Honeycomb finish stainless steel car enclosure to carry 16 persons capacity of load 1088 kg with minimum speed of 1.2 meter per second with/without attendant operation including all necessary safety features and in accordance	6	25,16,949.15	Each	1,51,01,694.92
	with the particulars of lift service requirement and technical specifications (as per tender documents) etc complete for servicing ground+9 levels including getting approval / obtaining completion certificate from the Lift inspectorate of Maharashtra Government for installation and commissioning of lift, before handing over the entire installation of the lift.				
	Cost of the cables, DBs, eartings and other accessories is already included in electrcal BOQ.				
	Pl refer attached specifications for lifts				
	Total				15101694.92