

BHARAT HEAVY ELECTRICALS LIMITED

Corporate Administration
BHEL House, Siri Fort, New Delhi-110049

Date:- 03.07.2014

Tender No. AA:GAX:14:BHR:401

Dated: 30.05.2014

Due Date & Time: 09.07.2014 by 11:00 Hrs

CORRIGENDUM-III

- 1) The price bid i.e. Price Bid Section-V is hereby revised after removal of percentage mentioned in summary of each part (Part-1 to Part-11) of price bid. Bidder should necessarily quote their best competitive offer in this revised price bid only attached with this Corrigendum-III.
- 2) Kindly ignore the previous price bid and submit your offer as per this revised price bid.

Note:- This document shall be treated as part of the tender document and hence shall be submitted along with bid duly signed and stamped by the bidder.

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PRICE BID (TOTAL FINAL AMOUNT)

Sl. No.	Descriptions	Individuals/Partnership Firms/HUF/AOP (Amount in Rs.)	Public Ltd./ Pvt. Ltd. (Amount in Rs.)
1	Total quoted amount for the scope of services mentioned in the tender & BOQ inclusive of all taxes but exclusive of Service Tax		
2	Service Tax payable by the party for the work		
3	Sub Total Amount (Excluding Service Tax payable by BHEL as mentioned below at Sl.no. 4)		
4	Service tax payable by the BHEL as service recipient under reverse charges on 60% of total quoted amount at Sl. No.-1 above.		NIL
5	TOTAL FINAL AMOUNT (Including all taxes)		
Note:-			
1)	The service tax payable by the bidder shall be indicated by the bidder at Sl. No.-2 under column no. 3 & 4 respectively as per prevailing Service tax rules		
2)	The service tax payable by BHEL under reverse charge mechanism for individual/ Partnership firms/ HUF/AOP as applicable shall be calculated as (Half of @12.36% of 60% of Amount Quoted under Sl. No.1) and shall be mentioned at Sl. No.4 under Column No.3. However for Public Ltd./ Pvt. Ltd. , this amount will be NIL		

FINAL PRICE

(Signature and Stamp of Bidder)

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"		
<u>TOTAL SUMMARY</u>		
<u>Sl.No.</u>	<u>DESCRIPTION</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	PART -1 TOTAL COST OF CIVIL WORKS (SUMMARY)	
2	PART-2 TOTAL COST OF ELECTRICAL WORK (SUMMARY)	
3	PART-3 TOTAL COST OF PLUMBING & SANITARY WORK (SUMMARY)	
4	PART-4 TOTAL COST OF FIRE ALARM & PUBLIC ADDRESS SYSTEM (SUMMARY)	
5	PART-5 TOTAL COST OF FIRE FIGHTING WORK (SUMMARY)	
6	PART-6 TOTAL COST OF AUDIO VISUAL SYSTEM FOR BOARD ROOM (SUMMARY)	
7	PART-7 TOTAL COST OF CCTV & ACCESS CONTROL SYSTEM (SUMMARY)	
8	PART-8 TOTAL COST OF SIGNAGES (SUMMARY)	
9	PART-9 TOTAL COST OF LIFT WORKS (SUMMARY)	
10	PART-10 TOTAL COST OF FURNITURE (MODULAR) (SUMMARY)	
11	PART-11 TOTAL COST OF HVAC WORK (SUMMARY)	
	TOTAL FINAL COST (excluding service tax)	

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"		
PART-1 COST OF CIVIL WORK		
SUMMARY		
Sl. No.	SUMMARY OF CIVIL WORKS	TOTAL QUOTED AMOUNT (In Rs.)
A	DISMANTLING WORK (SUB TOTAL OF SUB HEAD -A) OF PART-1 PRICE BID FOR CIVIL WORK	
B	EARTH WORK (SUB TOTAL OF SUB HEAD -B) OF PART-1 PRICE BID FOR CIVIL WORK	
C	RCC WORK (SUB TOTAL OF SUB HEAD -C) OF PART-1 PRICE BID FOR CIVIL WORK	
D	BRICK WORK (SUB TOTAL OF SUB HEAD -D) OF PART-1 PRICE BID FOR CIVIL WORK	
E	FLOORING WORK (SUB TOTAL OF SUB HEAD -E) OF PART-1 PRICE BID FOR CIVIL WORK	
F	DOORS AND WINDOWS (SUB TOTAL OF SUB HEAD -F) OF PART-1 PRICE BID FOR CIVIL WORK	
G	WATER PROOFING (SUB TOTAL OF SUB HEAD -G) OF PART-1 PRICE BID FOR CIVIL WORK	
H	FINISHING WORK (SUB TOTAL OF SUB HEAD -H) OF PART-1 PRICE BID FOR CIVIL WORK	
I	ROOFING WORK (SUB TOTAL OF SUB HEAD -I) OF PART-1 PRICE BID FOR CIVIL WORK	
J	STEEL WORK (SUB TOTAL OF SUB HEAD -J) OF PART-1 PRICE BID FOR CIVIL WORK	
K	PANELLING & PARTITION WORK (SUB TOTAL OF SUB HEAD -K) OF PART-1 PRICE BID FOR CIVIL WORK)	
L	FALSE CEILING WORK (SUB TOTAL OF SUB HEAD -L) OF PART-1 PRICE BID FOR CIVIL WORK)	
M	MISC WORK (SUB TOTAL OF SUB HEAD -M) OF PART-1 PRICE BID FOR CIVIL WORK)	
N	KITCHEN EQUIPMENT, MODULAR TOILET BLOCK & PANTRY (SUB TOTAL OF SUB HEAD -N) OF PART-1 PRICE BID FOR CIVIL WORK)	
O	UNDER GROUND & OVER HEAD WATER TANK (SUB TOTAL OF SUB HEAD -O) OF PART-1 PRICE BID FOR CIVIL WORK)	
P	LANDSCAPING & ROAD (SUB TOTAL OF SUB HEAD -P) OF PART-1 PRICE BID FOR CIVIL WORK)	
	TOTAL COST OF PART-1 CIVIL WORK	

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
A	DISMANTLING WORK				
1	Dismantling wooden boardings in lining of walls and partitions, including all supporting members etc.and stacking within stacking yard in different lots one as a servicable and another as an unservicable as directed by BHEL.				
	Of all thicknesses	SQM	15,890.64		
2	Dismantling doors, windows and clerestory windows (steel or wood etc.) shutter including chowkhats, architrave, holdfasts, glasses etc. complete and stacking within stacking yard in different lots one as a servicable and another as an unservicable as directed by BHEL.				
	Of area 3 sq. metres and below	EACH	433.00		
	Of area beyond 3 sq. metres	EACH	308.00		
3	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within stacking yard as directed by BHEL.				
	In cement mortar	CUM	774.02		
4	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within stacking yard as directed by BHEL.	CUM	137.49		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within stacking yard in different lots one as a servicable and another as an unservicable as directed by BHEL.	KG	7,341.55		
6	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within stacking yard as directed by BHEL.				
	Thickness up to 40 mm	SQM	645.46		
7	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within stacking yard as directed by BHEL.				
	100 mm dia pipe	RMT	392.40		
8	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within stacking yard as directed by BHEL.	SQM	11,194.76		
9	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material within stacking yard in different lots one as a servicable and another as an unservicable as directed by BHEL.	SQM	8,877.49		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means including loading, transporting, unloading to approved municipal dumping ground or as approved by BHEL, beyond 50 m initial lead, for all loads including all lifts involved.	CUM	1,620.96		
11	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within stacking yard as directed by BHEL. .	SQM	6,804.18		
12	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. meters and under including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete including disposal of rubbish within stacking yard as directed by BHEL. :				
	With cement mortar 1:4 (1 cement : 4 fine sand)	SQM	563.22		
13 (i)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-V REAR BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (ii)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-IV REAR BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
13 (iii)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-III REAR BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (iv)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-II REAR BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (v)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-I REAR BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (vi)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF GROUND FLOOR REAR BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (vii)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF BASEMENT COMPLETE (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (viii)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-II FRONT BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
13 (ix)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF FLOOR-I FRONT BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
13 (x)	BUY BACK COST FOR SERVICEABLE MATERIAL LOT (from item nos.1,2,3,4,5,7,8,9)OF GROUND FLOOR FRONT BLOCK (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1.00		
SUB TOTAL OF SUB HEAD-A					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
B	EARTH WORK				
14	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be leveled and neatly dressed.				
	All kinds of soil	CUM	66.81		
15	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	CUM	19.01		
16	Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.	CUM	14.40		
SUB TOTAL OF SUB HEAD-B					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
C	CONCRETE & RCC WORK				
17	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	CUM	10.76		
18	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. up to floor five level, excluding the cost of centering, shuttering and finishing :				
	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	CUM	56.14		
19	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size).	CUM	11.96		
20	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand including finishing the top smooth	SQM	247.50		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
21	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement :				
	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size)	CUM	102.22		
22	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 up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	CUM	7.63		
23	Centering and shuttering including strutting, propping etc. and removal of form for :				
	Foundations, footings, bases of columns, etc. for mass concrete.	SQM	62.04		
	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	SQM	585.08		
	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	SQM	134.65		
24	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.	KG	12,181.03		
SUB TOTAL OF SUB HEAD-C					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
D	BRICK WORK				
25	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	Cement mortar 1:6 (1 cement : 6 coarse sand)	CUM	382.98		
26	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
	Cement mortar 1:4 (1 cement :4 coarse sand)	SQM	4,188.10		
27	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks).	SQM	4,188.10		
SUB TOTAL OF SUB HEAD-D					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
E	FLOORING WORK				
28	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade Area of slab over 0.50 sqm.	SQM	5,565.31		
29	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by BHEL 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	753.47		
30	Providing and fixing Engineered wood of 13mm thick with dual sized interlocking panels and beveled joined with glue free click joint to secure long lasting joints. Top surface having wood veneer layer in thickness of 2.5mm with a backing of spruce. Recommended for moderate traffic area- Rs 540/sqft (Inclusive of Plank cost plus Underlay cost plus Installation without any ply cost plus taxes), plus local freight	SQM	235.75		
31	P/L 16mm to 18mm thick Italian marble /Botachino /parlantino /parlotocillia /Dyna / trevintino /lewante/ emprador of approved quality and design in flooring/skirting/dado on 18mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement mixed with pigment to match the shade of stone including rubbing and polishing complete as per design. for (basic cost of the italian marble. Minimum price Rs. 500/Sqft (VAT extra)	SQM	1,182.38		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
32	P/L 16mm to 18mm thick Italian marble/Satvario emprador of approved quality and design in flooring/skirting/dado on 18mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement mixed with pigment to match the shade of stone including rubbing and polishing complete as per design for (basic cost of the italian marble. Minimum price Rs 1200/Sqft (VAT extra)	SQM	486.86		
33	Providing edge moulding to 18mm thick marble stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by BHEL.				
	Granite work	RMT	1,546.35		
34	Extra for texture treatment on granite as per approved design	SQM	2,072.45		
35	Extra for sand blasting on Granite/Italian marble stone	SQM	153.51		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
36	<p>Rubber flooring :Norament 825 Pastille, Article 1902 The material is made of nora vulcanized rubber compound 925 with abundant natural fillers and environmentally compatible colour pigments. The surface of the material is pastille. The size of the tiles is 0.12 inches (3.2mm) overall thickness, 19.72 inches by 19.72 inches (501mm by 501mm). The product has a warranty of 10 years. Static load as per ASTM standards F970 Standard Test Method for Static Load Limit, residual compression, when tested with 800 lbs. \leq 0.005". The product is ISO 14001 Environmental Management Systems Certified. Product shall contain no polyvinyl chloride, with Taber abrasion test, ASTM D3389, H-18 wheel, 500 gram load, 1000 cycles, gram weight loss \leq 0.4. The product is slip resistant tested, ASTM D2047, \geq 0.8. Product shall be resistant to bacteria, fungi, and micro-organism activity, according to ASTM E2180 and ASTM G21. Product shall contain no halogens. The product has sound absorption of 6 dB per ISO 140-8. Flooring surface shall have the ability to be cleaned and maintained without the use of any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Manufacturer shall make available a cleaning system that effectively cleans the flooring surface using water, cleaning pads and a suitable cleaning machine, without the use of factory and/or field-applied coatings.</p>	SQM	122.20		
37	RUBBER FLOORING SKIRTING	RMT	64.00		
38	<p>Providing and laying at site 9mm thick laminate floor having an inbuilt 1mm compact soundabloc™ backing-class of use 32/23, wear resistance, impact resistance-IC 2, (as per EN 13329), Top surface having a MLC (MULTI LAYER COMPOSITE) highly developed laminate, top surface treated with (Aluminium oxide) titan X™ on top of high density fibreboard substrate (density 910 kg/cum) specially developed core: having patented click system perfectfold™ joints to secure long lasting joint.</p>	SQM	855.36		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
39	Providing and fixing 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for flooring of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade Area of slab over 0.50 sqm.	SQM	5,065.39		
40	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) :				
	25 mm thick.	SQM	150.90		
41	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	SQM	38.70		
42	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	RMT	171.60		
43	Providing and fixing of Modular Access Floor System, with finished floor height of 250 mm above the existing floor level, having floor panels of size 600 X 600 mm, thickness of 35 mm, having point load bearing capacity of 4.5 KN in 25 sq.mm, uniformly distributed load bearing capacity of 20 KN per sq. mtr, along with steel under structure capable of supporting axial load of 3600 kg.	SQFT	1,000.00		
SUB TOTAL OF SUB HEAD-E					

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
F	DOORS & WINDOWS				
44	Providing and Fixing pristine white UPVC windows Fenesta made of high impact modified grade UPVC and must be colorfast and confirm to BS:7413 code,BS:7412 code & BS: EN12608 code & should pass test of 'Classification -P'. for ignitability & ' class-I' for surface spread of flame as per BS:476-Part 7. The profile shall be a hollow 3-chamber (across depth) profile with an outer wall of thickness of min.1.5mm. The outer profile shall be house a front to back depth of 65mm/ 56 mm. All sections of the frame and sash shall be reinforced with GI section of min. width 2mm in accordance with the system suppliers recommendations as per design including hinges, stays, handles, etc. with Double Glass as per given specification 6mm tough (Low -e Glass)+12 mm air Gap (Filled with Argon gas)+ 6mm tough thick glass with weather seal in window is to be a double EPDM complete in all respect .There would be Warranty of 10 years on Profile & one year on hardwares.				
	Fully fixed (With low- e Glass)	Sqm.	481.27		
	Fully fixed (With out low -e Glass)	Sqm	320.85		
	Sliding windows(With Low - e Glass)	Sqm.	72.24		
	Sliding windows(With out Low - e Glass)	Sqm.	72.24		
	Doors(With Low -e Glass)	Sqm.	31.50		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
45	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	EACH	109.00		
46	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	EACH	190.00		
47	Providing and fixing concealed door clouser for flush door shutter upto 80kg weight.	EACH	46.00		
48	Providing and fixing bright finished brass handles with screws etc. complete :				
	125 mm	EACH	490.00		
49	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
	250x10 mm	EACH	245.00		
	150X10 mm	EACH	213.00		
50	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	EACH	109.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
51	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position:				
	Second class teak wood	CUM	10.37		
52	Providing 40x5 mm flat iron hold fast 40cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	EACH	1,236.00		
53	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	SQM	441.46		
54	Providing and fixing fire resistant door frame of section 143 x 57 mm having built in rebate made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/sqm) duly filled with vermiculite based concrete mix, suitable for mounting 60 minutes fire rated door shutters. The frame is fitted with intumescent fire seal strip of size 10x4 mm (minimum) around the frame and fixing with dash fastener of approved size and make, including applying a coat of approved brand fire resistant primer etc. complete as per direction of BHEL.	RMT	108.30		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
55	Providing and fixing 50 mm thick glazed fire resistant door shutters of 60 minutes fire rating conforming to IS:3614 (Part-II) tested and certified as per laboratory approved by BHEL with suitable mounting on door frame, consisting of vertical styles, lock rail, top rail 100mm wide, bottom rail 200mm wide, made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/m ²) duly filled FR insulation material and fixing with necessary stainless steel ball bearing hinges of approved make, including applying a coat of approved fire resistant primer etc. all complete as per direction of BHEL (pannelling to be paid for separately).	SQM	54.53		
56	Providing and fixing glazing in fire resistant door shutters, fixed panels, ventilators and partitions etc., with G.I. beading of appropriate size made out of 20 SWG G.I.sheet (zinc coating not less than 120 gm/m ²), fire resistant sealant, including applying a coat of approved fire resistant primer on G.I. beading etc. complete all as per direction of BHEL.				
	With clear fire resistant glass panes 6mm thick of approved brand, having minimum 60 minutes fire resistance.	SQM	54.53		
57	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 BHEL, all complete.	EACH	19.00		
58	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	SQM	132.06		
59	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) : Rectangular or square.	SQM	44.28		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
60	Providing and fixing stainless steel handle H type in glass door				
	a) 20mmX40x1200mm	EACH	42.00		
	b) 32mmX450mm	EACH	28.00		
61	Providing and fixing folding system for flush door with 3 panel folding kit.	EACH	14.00		
62	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of BHEL (Door handle, lock and stopper etc.to be paid separately).	SQM	287.79		
63	Providing and fixing of Automatic bi-parting sliding door operator, modular design, including internal cover with operator dimensions (H X T): 100 X 180 4150 mm Dorma - Germany / Kaba-Switzerland / Portalp – UK . The track profile should be separate from the main profile for enabling reduction in vibration insulation Microprocessor control self-learning reversing when obstruction is encountered. Microprocessor-controlled control unit. It should be Self-learning with adjustable parameters for opening and closing speed, hold-open time and opening and closing force. Class of protection IP 20. For max opening size of 2.0 m wide x 2.4 m height. The system should have constant external power supply 230 V, 50/60 Hz with 12mm frameless glass, 12mm thick clear toughened.	EACH	4.00		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
64	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured). Decorative type door.	SQM	54.29		
65	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :				
	2nd class teak wood 50 x 20 mm	RMT	1,063.10		
66	Fixing glass panes, with putty and glazing clips wherever necessary:				
	Float glass panes of thickness 5.5 mm	SQM	40.80		
67	Providing and fixing specified wood frame work consisting of battens 50x25mm fixed with rawl plug and drilling necessary holes for rawl plug etc. including priming coat complete				
	Hollock wood.	CUM	1.00		
68	Providing and fixing plywood 4 mm thick one side decorative veneer conforming to IS: 1328 (type-1) for plain lining / cladding with necessary screws, priming coat on unexposed surface with:				
	Decorative veneer facings of approved manufacture	SQM	1,158.83		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
69	Melamine polishing on wood work (one or more coat).	SQM	1,122.23		
70	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 BHEL.				
	With stainless steel cover plate minimum 1.25 mm thickness.	EACH	16.00		
SUB TOTAL OF SUB HEAD-F					
G	WATER PROOFING				
71	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	KG/50 kg cement	50.00		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
72	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around. d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately For the purpose of measurement the entire treated surface will be measured.	SQM	429.17		
73	P/L water proofing for horizontal and vertical surface after cleaning the surface & putting a fuse coat / counter coat /stopper coat and filled up the cracks pits holes with crystalline mortar pasts. It include a direct fluid barrier (DFB) coat of the surface with "hard set" HGMP emulsificated compound than laying of heigh tensile FG woven flexible porus sheet covering the entire roof area only and also laid on impregnation of the FG cloth with HGMP "E" filler based compound Laying of height density Expanded Polyurethane sheet over above layer over coat of HGMP soft set polymeric compound. The work finished with a protective coat and galvanized metal mesh covering the roof with polymeric compound and a plaster of chemical based cement mortar, all comp. for basement wall upto G L.				
	(a) Cleaning and scrubbing the surface upto slab level.				
	(b) Removal of duct, dirt exposing cracks, joints, pits holes, crevices, etc.				
	(c) Water wash of the surface with wire brush application to obtain a clean and moist surface.				
	(d) Fuse coat of the surface with 'Soft Set' Vapour permeable UV protected flexible crystalline polymeric compound.				

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	(e) Filling up / repairing the crack, hole, joints and uneven surfaces with heigh strength flexible vapour permeable crystalline mortar paste.				
	(f) Application of non shrink filler based micro crystalline polymeric slurry.				
	(g) Direct fluid barrier (DFB) coat with hard set HGMP filler based compound.				
	(h) Laying of heigh tensile FG woven flexible vapour sheet pre-impregnated with filler based aqueous co-polymer dispersion.				
	(i) Coat of DFB compound.				
	(j) Laying and fixing of Galvanized chicken mesh over the insulation.				
	(k) Chipping the plaster from the parapet wall upto 10"-12" from the inside bottom and complete removal of top plaster exposing the brick.				
	(l) Opening up the brick joint upto a depth of 1".				
	(m) Cleaning and coating the exposed areas with 'Soft Set' vapour permeable crystalline non shrink filler based polymeric compound.				
	(n) Filling up the grooves with polymeric mortar paste.				
	(o) Coating the treated surface with HGMP compound.				
	(p) Chemical bond plaster of 1:4 cement sand ratio over the wall.				
	(q) Curing the treatment for atleast 7 days.	SQM	216.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
74	Providing and applying Injection water proofing				
	(a) FOR VERTICAL WALLS (post construction) Providing and laying water proofing treatment by chemical injection grout process in water tank (Under ground and Over head) or other areas using 20mm dia MS nozzles of minimum 25mm deep in wall and @ 0.75m c/c along construction joints consisting of injecting. cement slurries of different viscosities under pressure by pump using acrylic based water proofing chemical mixed with neat cement slurry and sealing off nozzles after the injection operation with suitable admixture including providing and applying two coats of acrylic based water proofing chemical mixed with neat cement slurry as per manufacturers specifications and providing 12-15 mm thick neat finished cement plaster 1:3(1cemet :3 coarse sand) added with acrylic based water proofing chemical as per manufacturers specification and direction of BHEL representative.	SQM	309.38		
	(b) FOR HORIZONTAL SURFACE Providing and laying water proofing treatment by chemical injection grout process on base of raft, under ground water tank or other area as per specifications comprising of two layers of Cement mortar 1:3 mixed with Acrylic water proofing compound, providing and fixing 20mm pipe sleeves at 1.2m C/C and grouting acrylic based water proofing chemical mixed with neat cement slurry through the pipes with, complete with cutting & sealing of the pipes as per specification and direction of BHEL representative.	SQM	972.24		
75	Providing and laying roof insulation with 40 mm thick impervious sprayed, closed cell free Rigid Polyurethane foam over deck insulation conforming to IS - 12432 Pt. III (density of foam being 40-45 kg/cum), over a coat of polyurethane primer applied @ 6-8 sqm per litre, laying 400 G polythene sheet over PUF spray and providing a wearing course of 40 mm thick cement screed 1 : 2 : 4 (1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size) in chequered rough finish, in panels of 2.5 m x 2.5 m and embedding with 24 G wire netting and sealing the joints with polymerized mastic, all complete as per direction of BHEL.	SQM	2,530.01		
SUB TOTAL OF SUB HEAD-G					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
H	FINISHING WORK				
76	12 mm cement plaster of mix :				
	1:6 (1 cement: 6 fine sand)	SQM	5,849.51		
77	15-30 mm cement plaster on the rough side of single or half brick wall of mix:				
	1:6 (1 cement: 6 fine sand)	SQM	6,352.99		
78	Washed stone grit plaster on exterior walls of height upto 10 M. above level in two layers, under layer 12mm cement plaster 1:4 (1 cement: 4 coarse sand) furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15mm cement plaster 1:1/2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10mm nominal size) in panels with groove all around as per approved pattern including scrubbing and washing, the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of BHEL (Payment for providing grooves shall be made separately).	SQM	5,303.80		
79	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the BHEL :				
	15 mm wide and 15 mm deep groove	RMT	31,822.82		
80	Extra for washed grit plaster on exterior walls of height more than 10m from ground level for every additional height of 3 m or part thereof.	SQM	4,521.03		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
81	Finishing walls with textured paint of approved shade Asian paint				
	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	SQM	783.31		
82	Providing and applying two coats of fire retardant paint unthinned on cleaned wood/ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.	SQM	782.50		
83	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	SQM	12,202.50		
84	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
	Two or more coats applied on walls @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	SQM	12,020.50		
SUB TOTAL OF SUB HEAD-H					

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
I	ROOFING				
85	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 BHEL over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by BHEL 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 BHEL to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs				
	c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by BHEL. 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 BHEL including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the BHEL :				
	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	SQM	2,530.01		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
86	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :				
	In 75x75mm deep chase	RMT	324.90		
87	Making khurras 45x45cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20mm nominal size) over P.V.C. sheet 1mx 1mx400 micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edges	NOS	60.00		
88	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes.				
	110 mm diameter	RMT	1,148.75		
89	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	Bend 87.5° 110 mm bend	EACH	60.00		
	Shoe (Plain) 110 mm Shoe	EACH	60.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
90	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete. 110 mm	EACH	285.00		
91	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	EACH	60.00		
SUB TOTAL OF SUB HEAD-I					
J	STEEL WORK				
92	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.				
	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	KG	3,276.00		
93	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	1,530.00		
SUB TOTAL OF SUB HEAD-J					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
K	PANELLING & PARTITION				
94	<p>Metal System: Providing and fixing -Partition system up to ceiling height, which includes frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 GSM, consisting of U track 52mm wide having equal flanges of 30mm and 0.55mm thick (Base metal thickness) fastened to the floor slab, side wall and ceiling soffit as per requirement using Rawl Plug collated with zinc coated screw at 600mm centers, with first & last fixing point at not greater than 50 mm from either end. C studs 50mm wide having one flange of 34mm, other flange 36mm, lip size 6 mm and 0.55mm thick (Base metal thickness) installed perpendicularly within the flanges of floor and ceiling channels located directly opposite on each side of each other at not more than 610mm centers screw fixed on either side using 13mm Wafer Head Self Tapping screw. Maintain 5 to 10mm gap between C Stud and web of U Track. 50mm thick @ 32 kg/cum density Glass wool Insulation to be suspended on Insulation Holder Strip positioned at 1200mm vertical centers within the stud cavity.</p>				
	<p>Plasterboard and finishing: 2 x 12.5 mm tapered edge Standard board (conforming to IS 2095 Part1 1996; BS 1230: Part1: 1985 for Gypsum Board Type 1 & BS EN 520: 2004 Type A) on both sides is screw fixed to metal system using "type S" Self tapping 3.5 x 25mm corrosion resistant drywall screws spaced at 200mm centers on all joints and 300mm centers in the field of boards. Screw fixing is done mechanically. Finally, boards and screw heads are to be jointed and finished so as to have a flush look which includes filling tapered edge and square edges of board with Rapid Joint compound, Paper tape and final finishing with Easy finish (to achieve Level - 5 finish) (As per recommended practice of Boral Gypsum India Pvt Ltd). Provide movement control Joint at every 8m continuous interval. Marble skirting to flush finish with outer face of Standard Gypsum Board on both sides. Provide Shadow Line Stop bead at skirting level for 10mm reveal. Provide Shadow Line Reveal bead at 750mm and 2100mm from finished floor level. All perimeter and perimeter to be sealed using Inumescent sealant as per manufacturer's specifications.</p>	SQM	673.90		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
95	Providing and fixing 12mm thick toughened glass partition wall with aluminium U channel on top and bottom including siliconing&backer rod all as per instruction by the Architect/BHEL.	SQM	767.39		
96	Providing and fixing 6mm thick Frit glass on MDF surface with mirror silicon adhesive	SQM	204.56		
97	Providing and Fixing Wood works perforated panels in partition wall of width 600mm, thickness of 12mm and length 800mm or as required by the Architect/ approving engineer, made of a high density particle board substrate with a laminated facing as per the approved shade/ species & finish and a melamine balancing layer on the reverse side. The boards shall have a special perforation pattern where the visible surface has a ("Helmholtz" round perforation dia of 3mm and the reverse side with 12mm with 16mm pitch/oval perforation pattern of 32mm length, 6mm width) each. The panels shall provide a minimum sag resistance of RH90 and a fire rating class of 1 as per Part 7 of BS 476. The edges of the panels shall be grooved to receive splines for installation. The back of the perforated panel shall have sound absorbing non-woven acoustical fleece. The panels shall be mounted on special aluminium splines provided by approved by the Architect/BHEL.	SQM	141.38		
SUB TOTAL OF SUB HEAD-K					

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
L	FALSE CEILING				
98	<p>Providing & Fixing of Clip in GI metal ceiling System consisting of 600x600mm clip in tiles of pre coated galvanised steel in 0.5 mm thickness with bevel edge in white colour with standard perforation of 2.5mm dia & open area of 16%. The back of the tile should have black acoustical fleece. The NRC should be 0.70 and suitable for Green Building application, with Recycled content of 25%.</p> <p>Installation: To comprise of 3600mm long 'C' channels spaced at 1200mm centres securely fixed to the structural soffit by support clamp & approved hangers. The last hanger at the end of each C channel should not be greater than 600mm from the adjacent wall. 3000mm spring tee bars shall be spaced at 600mm centres shall be secured at every intersection with C channel using a holding clamp perpendicular & below the C channel. Use Dp-12 connector to splice two pieces of Dp-12 main carriers. Tiles should be clipped in between two spring bars from below.</p> <p>Perimeter trims to be of wall angles of white colour secured to walls at 450mm maximum centres.</p> <p>Make Armstrong / Hunter Douglas</p>	SQM	3,923.78		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
99	<p>Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the BHEL but excluding the cost of painting with: India Gypsum.</p>				
	12.5 mm thick tapered edge gypsum board conforming to IS: 2095- Part I.	SQM	4,400.37		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
100	<p>Metal System: Providing & Fixing of Clip-in plain finish GI metal ceiling System consisting of 600x600 mm clip in tiles of pre coated galvanised steel in 0.5 mm thickness with bevel edge in white colour (RAL 9010) with Light Reflectance > 86% and suitable for Green Building application, with Recycled content of 25%.</p> <p>Installation: To comprise 3000mm long 'C' channels spaced at 1200mm centres securely fixed to the structural soffit by support clamp & approved hangers. The last hanger at the end of each C channel should not be greater than 600mm from the adjacent wall. Use a C-channel connector for splicing two pieces of C-channels. 4000mm Dp-12 Main carriers (spring tee bars) shall be spaced at 600mm centres in a direction perpendicular to the C-channels and shall be secured at every intersection with C channel using a dp-12 hanger. Tiles should be clipped in between two Dp-12 carriers (spring tee bars) from below.</p> <p>Perimeter trims to be of wall angles of white colour secured to walls at 450mm maximum centres. Cut tiles to be secured to the wall angles using a spring clamp. Make Armstrong / Hunter Douglas</p>				
	<p>Plasterboard and finishing: 1 x 12.5 mm tapered edge Moist Bloc board (conforming to BS 1230: Part 1: 1985 for gypsum board Type 3, 4 and BS EN 520: 2004 Types H1) is then screw fixed with Self Tapping Drywall screw 3.5 x 25 mm at 230mm centers. Cut ends of the boards and ceiling perimeter to be screwed at 150 mm centers. Screw fixing is done mechanically. Finally the boards and screw heads are to be jointed and finished so as to have a flush look which includes filling the tapered edge and square edges of the board with Rapid Joint compound, paper tape and final finishing with Easy finish (Level-5 finish) (As per recommended practice of Boral Gypsum India Pvt Ltd).</p>	SQM	199.43		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
101	<p>Providing & Fixing of Wooden finish Suspended Ceiling System with WOODWORKS (MICRO LOOK) EDGE TILES WITH 15 MM Silhouette Grid with Black reveal EXPOSED GRID.</p> <p>The tiles with perforation pattern R3 perforation with approved laminate/natural veneer finish should have Humidity Resistance (RH) of 90%, Fire Performance Class 1(BS - 476) in module size of 600mm x 600mm x 12mm</p> <p>The grid should be make with 15mm wide T - section flanges colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 43mm and a load carrying capacity of 23.71 Kgs/M2. The T Sections have a Galvanizing of 120 grams per M2 & passed through 500 hrs of Salt test.</p>	SQM	378.67		
102	<p>Providing & fixing of Aluminum U shaped Baffle system consisting of 50 mm Blaade withs, 100 mmDepth & 300 mm in Length made ouy of Aluminum of 0.7 mm Thickness. The U shaped Baffles are installed at 200mm centre to centre distance on the Aluminum Carrier bar.</p>	SQM	256.51		
103	<p>Providing and fixing in true level, Open cell ceiling containing 'U' shaped sections with sharp edges of dimensions 15mm (Flange width) X 38mm (web height) manufactured out of Aluminum of 0.40mm gauge of white colour. The open cell 'Lock-in' ceilings shall have 2 components viz. Open cell Main Carrier (top and bottom notches) of length 2000mm, and Horizontal Carrier of length 2000mm. The Open Cell Main Carriers shall have notches on top or bottom spaced at 100mm to be used with matching Horizontal Carriers. The main carriers are suspended at every 600 mm c/c spacing with spans longer than the length of main runner connected by means of connector. The 'U' Shaped horizontal carriers are to be interlocked by matching the top and bottom notches to form cells of size 100 mm. the perimeter trim to be secured at every 450mm cc.</p>	SQM	418.89		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
104	Providing and fixing of suspended frameless glass ceiling. The price shall consist of 2x4mm laminated clear glass with a translucent PVB interlayer in size of 900mmx900mm with primed edges all around. The laminated glass layer is connected to a proprietary hinged push lock mechanical patch fitting at 4 corners of the glass. glass panels can be hinge down at 2 corners attached to the upper part of the suspended tubular structure. Safety stainless steel wires are attached to other 2 corners which in turn connected to the lower and upper part of the push lock mechanism. The glass panels can be secured back in position by pushing the other 2 corners into upper part of the push lock mechanism. Distance between glass panels are kept at 8mm apart.	SQM	20.63		
SUB TOTAL OF SUB HEAD-L					
M	MISC WORK				
105	Providing and fixing Dorma (Variflex) Sliding folding partiton.	EACH	1.00		
106	Providing and fixing Roller blind on windows				
	A(1) type roller blinds phifer style 5000* Motorized	SQM	120.37		
	A(2) type Roller blinds phifer style 7500* (Blackout) Motorized	SQM	120.37		
	Providing and fixing Motors Make Elero	EACH	88.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	B Type Rooler blinds phifer style 2410* Manual	SQM	182.00		
	C type roller blinds phifer style 2390*	SQM	134.00		
	D type roller blinds phifer style 4500* Manual	SQM	451.00		
	Providing Remote 5 Channel	EACH	88.00		
	Motorized installation of Roller blinds	EACH	185.00		
	Manual installation of Roller blinds	EACH	88.00		
107	Providing and fixing Tensile structure in attrium	JOB	1.00		
108	Providing and fixing M.S. sliding gate made from 25X2M M.S. pipe 100X100X3M M.S. pipe with 100X100X100X5m M.S. channel for top frame as per specification and Drawing complete with necessary fixture & accessaries in best work markship with one coat of grey epoxy primer and comprising of folling etc.				
	1A) MOTORISED GATE 9200MX2000HEIGHT	EACH	2.00		
	1B) MOTORISED GATE 6300X2000HEIGHT	EACH	1.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
109	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 BHEL. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	KG	2,967.75		
110	Providing and fixing of U channel system in stain finish stainless steel AISI 304 SS handrail system having 80*30*3 U channel system connected with 6+1.52+6m laminated glass with emified stem keys and 38m dia to be hand rail complete with all necessary bends and termination and with applicable LED light.	RMT	112.00		
111 (A)	A) Providing & Fixing Durable inkjet printed 3M Scotchprint graphics on 3650-114 self-adhesive vinyl, special CLEAR film to produce coloured imagery on glass with 8520 overlamine with a polyethylene-coated layflat liner.. Customised imagery. & the thickness of 2 mil (0.05mm) without adhesive & 3-4mil (0.8-0.10mm) with adhesive, having minimum tensile strength of 5.5 pounds/inch at 73°F (0.9 kg/cm at 23°C), the adhesive should be Pressure activated, positionable, withair release channels.MCS warranty of 2 yrs (exposed to sunlight), 5 years (indoors) must be endorsed by 3M India Limited Architectural Market Department.. Contractors payment wouldn't be released until & unless he/she produces orginal warranty certificate from the manufacturer. Glass Graphics for GLASS DECORATION Applied on glass and other rigid, clear substrates. (partitions, doors, windows etc.)	SQM	232.34		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
111B)	Providing & Fixing Digitally reproduced 3M Scotchprint decorative graphics on IJ180C (with controltac & comply feature for direct, bubble-free application on walls) with UV protective matte overlamine 8520 with a polyethylene-coated paper liner. Customized imagery & the thickness of 2 mil (0.05mm) without adhesive & 3-4mil (0.8-0.10mm) with adhesive, having minimum tensile strength of 5 pounds/inch at 73°F (0.9 kg/cm at 23°C). the adhesive should be Pressure activated, positionable, with air release channels. MCS warranty of 5yrs must be endorsed by 3M India Limited Architectural Market Department.. Contractor's payment wouldn't be released until & unless he/she produces original warranty certificate from the manufacturer. WALL MURAL-Directly pasted on POP finish wall. Conformable & durable decorative graphics directly applied on walls, cielings, elevator doors, partitions, pillars, aluminum cladding etc.	SQM	148.70		
111C)	Providing & Fixing 3M Frosted Translucent, cast PVC, selfadhesive vinyl, special CRYSTAL effect film to reproduce Sandblasting effect on glass with customized designs, thickness of 2 mil (0.05mm) without adhesive & 3mil (0.8)with adhesive having minimum tensile strength of 3.5 pound/inch at 73 F(0.6 kg/cm at 23 C). Adhesion after 24hrs of installation should be 4 pounds/inch (0.7 kg/cm) on Acrylic, Glass Polycarbonate: MCS warranty of 3yrs (if exposed to direct sunlight) to 15yrs (indoors) must be endorsed by 3M India Limited Architectural Market Department. Contractors payment wouldn't be released until & unless he/she produces original warranty certificate from the manufacturer. DECORATIVE/PRIVACY FILM ON GLASS. Electronically/computer plotter cut. Applied on glass and other rigid, clear substrates. (partitions, doors, windows etc.). Available in 5 colours	SQM	464.68		
111D)	Providing and fixing of White Board WH111. White PVC film with PSA. The film should have a flat top coating and comply to thickness of 0.17mm. MCS warranty of 3yrs must be endorsed by 3M India Limited Architectural Market Department .. Contractors payment wouldnot be released until & unless he/she produces original warranty certificate from the manufacturer. WHITE BOARD FILM FOR PROJECTION Applied on Wall,Glass in Meeting rooms	SQM	37.17		
SUB TOTAL OF SUB HEAD-M					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
N	EQUIPMENT FOR KITCHEN, MODULAR TOILET CUBICLE & PANTRY				
112	Providing and installing kitchen equipment as per list below & specification for basement & ground floor	EACH	1.00		
Details of Basement Floor Kitchen Equipment					
S.no	Particulars		Sizes(In MM)	Qty	
1	STORAGE RACK(S.S) Shelf: 1.2 mm (Thick) S.S Sheet 304 Grade, Upright 35x351.6 mm S.S Pipe 304 grade, Adjustable feet 35x35 mm Nayloplast		900X450X1800	1	x
2	UNDER COUNTER REFRIGERATOR Top to be 1.6 mm thick SS sheet 304 Grade & Back side inserting G.N Pans 1/6 x 100 with lid. Inner body to be 1.0 mm thick SS 304 Grade Outer body to be 1.0 mm thick SS 304 Grade. Framing to be 35x35x5 MS Angle. Coiling to be copper pipe 3/8 blue star with solder Puff Insulation 65 mm thick Shelves to be 10/8 mm wire shelves removable & adjustable Doors to be auto closer. Refrigeration systems to be Kriloskar cap. & all electrical components to be ISI make Adjustable feet to be 150 mm SS 304 Air Grill to be SS 304		1500X600X850	1	x
3	DISH WASHER MACHINE Standard		Electrolux (EHTAROW)	1	x
4	WORK TABLE WITH SINK Top 1.6 mm (Thick) S.S Sheet 304 Grade, Sink 1.6 mm SS with 35 mm C P Waste 304 Grade Cross Bars 25x25x1.6 mm pipe S.S 202 Grade Upright 35x35x1.6 mm S.S Pipe 202 Grade Frame 35x35x5mm MS Angle Adjustable feet 35x35 mm Nayloplast		1800X600X850+6	1	x
5	STORAGE RACK(S.S) Shelf: 1.2 mm (Thick) S.S Sheet 304 Grade, Upright 35x351.6 mm S.S Pipe 304 grade, Adjustable feet 35x35 mm Nayloplast		900X450X1800	1	x

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6	STORAGE RACK(S.S) Shelf: 1.2 mm (Thick) S.S Sheet 304 Grade, Upright 35x351.6 mm S.S Pipe 304 grade, Adjustable feet 35x35 mm Nayloplast		900X450X1800	1	x
7	GLASS RACK Shelf: 1.2 mm (Thick) S.S Sheet 304 Grade, Upright 35x351.6 mm S.S Pipe 304 grade, Adjustable feet 35x35 mm Nayloplast		600X600X1200	1	x
8	WATER COOLER		150 LTRS	1	x
9	ICE CREAM CABINET Cellfrost Standard		1150X600X850	1	x
10	DIRTY DISH TROLLEY(2 TIER) Top will be 1.2 mm thick 304 Grade SS. Structure will be 32x32 ss pipe 304 Grade		600X450X850	2	x
11	PICK UP COUNTER WITH TRAY SLIDE Top 1.6 mm thick SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Covering will be 1 mm thick 304 Grade SS. Adjustable Feet 35x35 mm Nayloplast		600X750X850	2	x
12	HOT FOOD BAIN MARIE Top 1.6 mm Thick SS Sheet 304 Grade, Insulation Glass Wool 65 mm Shelf 1.2 mm thick SS Sheet 304 Grade, Containers G N Pans (Anupam). Side Covering 1 mm thick SS Sheet 304 Grade. Frame 35x35x1.6 mm SS pipe. Legs 150mm x 35mm Dia Adjustable Feet SS. Element Hot Top Make. Selector switch Indfosh, Indicator Local Make. Thrmostat Hot Top Make. Boll Valve 19 mm dia (Indian Make)		1800X750X850	2	x
13	COLD FOOD BAIN MARIE Inner body to be 1.0 mm thick SS 304 Grade, Outer body to be 1.0 mm thick ss 304 grade, Framing to be 35x35x5 MS Angle. Coiling to be copper pipe 3/8 blue star with solder Puff Insulation 65 mm thick. Shelves to be 10/8 mm wire shelves removable & adjustable. Doors to be auto closer. Refrigeration systems to be Kriloskar cap. & all electrical components to be ISI make. Adjustable feet to be 150 mm SS 304 Air Grill to be SS 304.		750X750X850	1	x
	Equipment For Buffet Counter				
1	STAINLESS STEEL CHAFING DISH (Cap 7 Ltrs. With standard specification)		CAP.7 LTRS	8	x
2	SOUP KETTLE (Cap. 7 Ltrs. With standard specification)		CAP.7 LTRS	2	x
3	MICRO OVEN (Cap. 20 Ltrs With standard specification)		CAP.20 LTRS	1	x

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
Details of Ground Floor Kitchen Equipment					
S.no	Particulars		Sizes(In MM)	Qty	
1	SUPPORT TABLE Top 1.6 mm thck SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		450X600X850+150	1	x
2	TWO BURNER COOKING RANGE Top 1.6 mm thck SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Side covering 1 mm thick SS Sheet 304 Grade, Frame 35x35x5 mm MS Angle, Burner Support 1.2 mm thick SS Sheet 304 Grade, Front Panle 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Adjustable feet 35x35 mm Nayloplast, Needle Valve HPC make Pan Support 400x400 mm CI, Drip Tray 1.2 mm SS Sheet 304 Grade		1200X600X850+150	5	x
3	SUPPORT TABLE Top 1.6 mm thck SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		900X600X850+150	1	x
4	SUPPORT TABLE Top 1.6 mm thck SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		900X600X850+150	1	x
5	CHAPPATI ROLLING TABLE Top 1.6 mm thck SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		1500X600X850+150	1	x
6	CHAPPATI PLATE CUM PUFFER Plate 18 mm thick MS, Puffer CI with 4 mm dia perforated, Burner R.V (NGM) with Pilot Lamp & Piftail Needle valve United, Side covering 1 mm thick SS Sheet 304 grade shelf 1.2 mm thick SS Sheet 304 Grade, Front Panel 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 Plastic		1500X600X850+150	1	x
7	CHAPPATI COLLECTION TABLE Top 1.6 mm thck SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		650X600X850	1	x
8	EXHAUST HOOD (without ducting, hanging and fans) Outer body 1 mm thick SS Sheet J-4 Grade Inner Brackets 1 mm thick SS Sheet J-4 Grade Filters 1 mm thick SS Sheet J-4 Grade		1800x900x700	3	x

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
9	UNDER COUNTER REFRIGERATOR WITH O/S Top to be 1.6 mm thick SS Sheet 304 Grade, Inner body to be 1.0 mm thick SS 304 Grade, Outer Body to be 1.0 mm thick SS 304 Grade, Framing to be 35x35x5 MS Angle, Coiling to be copper pipe 3/8 blue star with solder, Puff Insulation 65 mm thick, Shelves to be 10/8 mm wire shelves removable & adjustable, Doors to be auto closer, Refrigeration systems to be Kirloskar cap. & all electrical components to be ISI make, Adjustable feet to be 150 mm SS 304, Air grill to be SS 304		1800X600X750+450	2	x
10	PICK UP COUNTER WITH O/S Top 1.6 mm thckk SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		1500X600X850+150	2	x
11	WORK TABLE Top 1.6 mm thckk SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast		1800X600X750	1	x
12	WORK TABLE WITH SINK & O/S Top 1.6 mm thckk SS Sheet 304 Grade, Sink 1.6 mm SS with 35 mm CP Waste 304 Grade, Cross Bars 25x25x1.6 mm pipe SS 202 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast		1200X600X850+150	1	x
13	WORK TABLE Top 1.6 mm thckk SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		1200X600X850+150	1	x
14	TWO DOOR REFRIGERATOR		750X750X2400	1	x
15	CLEAN DISH TABLE WITH O/S Top 1.6 mm thckk SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		900X600X850+150	1	x
16	THREE SINK UNIT WITH O/S Top 1.6 mm thckk SS Sheet 304 Grade, Sink 1.6 mm SS with 35 mm C P waste 304 Grade, Crosss Bars 25x25x1.6 mm pipe SS 202 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		1800X600X850+150	1	x
17	DISH LANDING TABLE WITH GARBAGE CHUTE & O/S Top 1.6 mm thckk SS Sheet 304 Grade, Garbage Chute 175 mm dia & 1.6 mm thick SS Sheet 304 Grade, Crosss Bars 25x25x1.6 mm pipe SS 202 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		1800X600X850+150	1	x

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
18	CLEAN DISH RACK Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		900X450X1800	1	x
19	WORK TABLE Top 1.6 mm thckk SS Sheet 304 Grade, Shelf 1.2 mm thick SS Sheet 304 Grade, Upright 35x35x1.6 mm SS Pipe 202 Grade, Frame 35x35x5 mm MS Angle, Adjustable feet 35x35 mm Nayloplast.		1800X600X850	1	x
20	EXHUST SYTEM INCLUDING, GI SHEET DUCTING, AND FANS. Sheet to 24 swg GI sheet		AS PER SITE CONTIONS	1	x
21	PNG PIPE LINE, INCLUDING GAS BANK FOR 12 CYLINDERS, COMPLETE WITH ALL ACCESSORIES. Gas pipe line will be 12 mm dia c class MS pipe with ncv manifolds pressure gauge flexible pipe etc. all gas pipe line accessories will be hpg make		AS PER EQUIPMENT LAYOUT	1	x
22	WET GRINDER with standard specification		10 Liters	1	x
23	PULOLISER with standard specification		Medium Capacity	1	x
24	FOOD PROCESSAR (IMPORTED SIRMAN) standard		Standard	1	x
25	DOUGH KNEADER with standard specification		25 Litres	1	x

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
113	Providing and installing modular toilet cubicles as per drawings:Supply and install modular toilet cubicles of MERINO-BESCO make 'TITAN STD' series as per manufacturer's std specifications.All intermediate panels, pilasters, doors shall be made up of Solid Compact Laminate (Phenolic Core Board) as per IS 2046 based on thermosetting resins, homogeneously reinforced with cellulose fibers making cubicles impervious to Water, resistant to Fire, etc. Compact laminate should be Greenguard and IGBC certified. Hardware and Fixing: All accessories shall be of Merino's SS 304 grade including all hardware/fitings. The pilaster are anchored to the flooring using adjustable SS legs.The SS top rail shall be fixed on the top of the pilasters. Accessories: Std accessories include SS Hinges, SS Door knob,SS legs, SS thumb turn indicator, SS coat hook, SS top rail and SS channels (All accessories in SS 304 grade). Titan Std Series Cubicles: Std Sizes (W x D x H)- 900 mm x 1550 mm x 1980 mm, (Height is including 150 mm gap from bottom) Door Size- 600 mm	UNIT	16.00		
114	Providing and installing pantry modular under counter and overhead storage in all floors	JOB	1.00		
SUB TOTAL OF SUB HEAD-N					
O	UNDERGROUND & OVERHEAD WATER TANK ESTIMATE				
115	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	CUM	694.90		
116	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	CUM	258.84		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
117	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials. All kinds of soil.	CUM	562.08		
118	Disposal of surplus excavated earth including loading unloading upto lead of 5km.	CUM	436.06		
119	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	CUM	21.10		
120	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size).	CUM	106.96		
121	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars.	KG	10,695.76		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
122	Centering and shuttering including strutting, propping etc. and removal of form for :				
A	Foundations, footings, bases of columns, etc. for mass concrete.	SQM	16.31		
B	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	SQM	385.97		
C	Suspended floors, roofs, landings, balconies and access platform.	SQM	95.00		
D	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	SQM	5.00		
E	Edges of slabs and breaks in floors and walls. A) under 20cm wide	RMT	50.76		
123	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 BHEL and consisting of : i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer. Using rough kota stone.	SQM	164.58		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
124	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by BHEL : Using rough Kota stone	SQM	199.35		
125	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete : Serrated with central bulb (225mm wide, 8-11mm thick).	RMT	6.90		
126	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of : i) Ist course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. ii) IInd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area. iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)	SQM	285.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
127	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	EACH	30.00		
128	Supplying and fixing C.I. cover without frame for manholes :				
	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg.	EACH	3.00		
129	Supplying and fixing C.I. frame for C.I. manual hall cover in item no. 19.18.2	EACH	3.00		
130	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved byBHEL, 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	221.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
131	Providing and laying Ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete.	SQM	95.00		
132	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	per litre	20,000.00		
133	Providing and fixing soil, waste and vent pipes 100 mm dia. Sand cast iron S&S pipe as per IS: 1729.	RMT	3.00		
134	Providing and fixing terminal guard: 100 mm Sand cast iron S&S as per IS - 1729	EACH	3.00		
135	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter: 100 mm	EACH	3.00		
SUB TOTAL OF SUB HEAD-O					
P	LANDSCAPING & ROAD				
136	Renovating lawns including weeding, cheeling the grass, forking the ground, top dressing with sludge or manure, mixing the same with forked soil, watering and maintaining the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing and disposal of rubbish as directed, including supplying good earth if needed but excluding the cost of sludge or manure (the good earth shall be paid for separately).	100 Sqm	5800.00		

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
137	Supplying and stacking of good earth at site including royalty and carriage up to 1 km (earth measured in stacks will be reduced by 20% for payment).	CUM	1137.00		
138	Supplying and stacking sludge at site including royalty and carriage up to 1 km (sludge measured in stacks will be reduced by 8% for payment).	CUM	227.40		
139	Fine dressing of the ground	100 sqm	5800.00		
140	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge..	Cum	1,044.00		
142	Grassing with selection No.1 grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the good earth shall be paid for separately).	100 sqm	5800.00		
143	Disposal of surplus excavated earth including loading unloading upto lead of 5km.	CUM	1,137.00		
144	2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2mm and 11.2mm size respectively per 100 sqm. and 52 kg. and 56 kg. of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively including a tack coat with hot straight run bitumen including consolidation with road roller of 6 to 9 tonne capacity etc. complete. (tack coat to be paid for separately) : With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt. 2.5 CM BITUMESTIC CARPET ON EXITING ROAD SURFACE	SQM	5000		

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
145	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 ofBHEL (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved byBHEL).	CUM	8.63		
SUB TOTAL OF SUB HEAD-P					
<p>UPVC WINDOW SYSTEMS SPECIFICATIONS: SPECIFICATIONS for the works that need to be executed and the materials to be used in the placement and installation of uPVC windows and associated products/fitting, to the entire satisfaction of:The following specifications describe the standards required for both manufacture and installation of windows. Windows All window frames and sashes shall be manufactured from white UPVC profile, which shall have 3 hollow chambers from front to back. The outer profile shall have a front to back depth of 65/118mm.All sections of the frame and sash shall be reinforced in accordance with the system supplier's recommendations using galvanized mild steel in a single continuous length.</p>					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
GENERAL REQUIREMENTS					
<p>Profile The profile is to be extruded from a compound that has been blended to ensure quality and consistency. The material must be pristine white high impact modified window grade UPVC and must be colorfast and conform to BS 7413 code. The profile shall be a hollow 3-chamber (across depth) profile with a outer wall thickness of 2.4mm only. The outer profile shall have a front to back depth of 65/118mm. The profile shall be uniform and free from foreign bodies, cracks or marks. Refer section drawing for Outer profile/transoms/sash. Note: No profile shall contain recycled material.</p> <p>Fabrication of window The window units shall be designed with all corner joints, transom joints and mullion joints being mitred and fusion welded. All excess material is to be neatly trimmed and neatly feature grooved/raised nib finish at corners, transom joints and mullion joints. There is to be no mechanical joining of the profile. No polishing flush of any joints will be permitted. The window units shall be designed so that the route of drainage is prevented from passing through the reinforcement chamber. The finished product shall be free from all sharp edges, burrs and the like that may be hazardous to the user. The dimensional tolerances on the finished outer frame height and width shall be + 3mm. Frame assemblies shall be such that they can be installed square within a maximum difference in the diagonals of 4mm. In all window units, adequate drainage should be provided to permit the escape of water from platforms or horizontal members beneath each sealed unit. Monsoon Stop to be provided wherever necessary to provide barrier to excess rain water.</p> <p>Reinforcement Reinforcement shall be made from mild steel of 1.5 to 3mm thickness as per strength requirement. The reinforcement shall be installed in accordance with the recommended actions. The reinforcement is to be installed to within 25mm of any weld in the frame and shall be in a single continuous length. The reinforcement shall be secured to the profile so that it does not move or rattle and it maintains the structural integrity of the frame and satisfactory thermal separation. Reinforcement is to be fixed at a maximum of 100mm from the ends and then at a maximum of 400mm centers.</p>					
<p>Glazing and Weather seals</p> <p>GLAZING Window shall be such that glazing or re-glazing on site is possible without the need to remove the outer frames from the structure of the building. All glazing is to be packed in accordance with BPF/GGF and the system supplier's recommendations. All beads will be cut at the correct degree recommended by the manufacturer. Glass retention clips must be fitted in accordance with the Systems supplier's recommendations.</p> <p>WEATHER SEALS The weather seal to be used in windows is to be a bubble E.P.D.M. as per ASTM-D412 & ASTM-D2240 codes. The weather seals are to be fitted in continuous lengths and grooves. The joints in the vent weather seal are to be positioned at the bottom and in the outer frames at the top.</p>					

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	<p>Raw Material</p> <p>The material from which the profiles are made shall consist substantially from white polyvinyl chloride. Only those additives and pigments may be used that are needed for the manufacture of the compound and its subsequent conversion into sound, durable extrusions of good surface finish and mechanical strength, as assessed by the requirements of this specification.</p> <p>Profile Properties</p> <p>Appearance and Finish</p> <p>The color of the profile shall be uniform and the color of all profiles in a system shall be uniform. The profile shall be free from foreign bodies, cracks or sink marks when viewed by normal corrected vision at 90o to the surface and at a distance of 1 meter in normal diffused north light.</p> <p>Dimensions and Weights</p> <p>The profiles shall be straight such that the longitudinal axis of the profile, as measured on the face surfaces, may deviate from the straight line by no more than 1mm per meter.</p> <p>The cross section of the profile must conform in shape and dimensions and may deviate by no more than + 0.5mm; glazing channels and seal grooves may deviate by not more than + 0.3mm. The weight of the profile per meter must not be more than 5% below the nominal value.</p> <p>Installation of Frame</p> <p>Before installation the Installation Team is to make sure that the opening has been prepared and any repair work has been carried out. Allow a 5mm gap between the frame and the opening. The new window shall be set in the prepared opening. Allow for suitable packing blocks. The window shall be fixed into the aperture, by drilling and fixing through the outer frame, to the existing structure using 'Fischer' fixings, F8S type bolts. The fixings shall be no less than 150mm from corners or transoms/mullions and at no more than 600mm centers.</p> <p>When the frame is securely fixed in position then fit glass and glazing beads. Allow for any necessary glazing blocks and glass lock devices. Check windows for correct operation before proceeding with making good. No fixings are to penetrate the drainage channels. The gap between masonry and the frame is to be filled with Neutral Cure Silicon (exposed to sun surface) and/or Acrylic Sealant (only for the internal surface). The silicone joints should be covered with Architraves/trims.</p>				

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
Glass Specification					
Glass to be used is a single, doubled or tripled glazed of 3 to 45mm.Extra processing like Frosting, tempering & lamination can be done to the glass from the approved glass processor by the supplier.Glass thickness to be proposed by the supplier as per the wind load conditions prevailing at the site.					
FRAMELESS GLASS CEILING					
Suspension Grid – Horizontal support profiles All glass panels connected to a proprietary hinged –push lock mechanical patch fitting at 4 corners of the glass placed at 900 mm center to center. A wide span girder as primary profile made up of galvanized steel installed perpendicularly to a wide span girder a secondary profiles at maximum centers of 900mm, and suspended with M6 threaded rod and expansion bolts through hanging brackets at 1000mm c.c.Distance between suspension rods : maximum 900 mm. Distance between primary wide span girder : maximum 900 mm The total height should be at least 363 mm measured from the lower edge of the glass pane to the lower edge of the mounting level. When installing the cross-wide light reflector, the total height from the lower edge of the glass panel to the upper edge of the reflector should generally be at least 510 mm					
Glass Ceiling Panels					
900mm wide and 900mm length square panels in size to suit design. Glass panels are made up of @x 4mm laminated clear glass with translucent PVB with primed edges all around.					
Suspension Hangers					
Suspension rods: 6mm diameter straightens G.I. Rods with chrome plated adjustment clips 900mm c.c. Suspension threaded rods: 9mm diameter galvanized steel threaded rods with expansion bolts@900mm					

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
CEILING SYSTEM					
Clip in GI Metal Tile (600x600mm)					
<p>Providing & Fixing of Clip in GI metal tile ceiling System consisting of 600x600mm clip in tiles of pre coated galvanised steel in 0.5 mm thickness with bevel edge on all sides in white colour polyester powder coat finish with minimum 60 microns paint thickness with standard perforation of 2.5mm dia & open area of 16%. The back of the tile should have black acoustical fleece. The NRC should be 0.70 and suitable for Green Building application, with Recycled content of 25%.</p> <p>Installation: To comprise of 3600mm long 'C' channels spaced at 1200mm centres securely fixed to the structural soffit by support clamp & approved hangers. The last hanger at the end of each C channel should not be greater than 600mm from the adjacent wall. 3000mm spring tee bars shall be spaced at 600mm centres shall be secured at every intersection with C channel using a holding clamp perpendicular & below the C channel. Use Dp-12 connector to splice two pieces of Dp-12 main carriers. Tiles should be clipped in between two spring bars from below. Perimeter trims to be of wall angles of white colour secured to walls at 450mm maximum centres.</p> <p>b) Open cell Aluminium Ceiling Tile size 600mmx600/1200mmx38-50mm</p> <p>Providing and fixing in true horizontal level Open cell Aluminium lay-in ceiling tiles of size 600mmx600/1200mmx38-50mm having Humidity Resistance of 100% RH, and having Fire Performance A2-s2, d0. The tile of 'global white' color with cell size options of 100mm (72% open area).</p> <p>The grid should be of "manufacturer standard supporting system" make with 15mm wide T - section flanges colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 38-50mm and a load carrying capacity of 14 Kgs/M2. The T Sections have a Galvanizing of 90 grams per M2 & passed through 500 hrs of Salt test. The Tile & Grid system used together should carry a 15 year warranty.</p>					
INSTALLATION:					
<p>To comprise main runner spaced at 1200mm centres securely fixed to the structural soffit using manufacturer standard supporting system (specifications below) at 1200mm maximum centre. The First/Last suspension system at the end of each main runner should not be greater than 450mm from the adjacent wall.</p> <p>Flush fitting 1200mm long cross tees to be interlocked between main runners at 600mm centre to form 1200 x 600 mm module. Cut cross tees longer than 600mm require independent support. 600 x 600mm module to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200 mm cross tees.</p> <p>Perimeter trim wall angles of size 3000x19x19mm, secured to walls at 450 mm maximum centres.</p> <p>SUSPENSION SYSTEM accessories manufactured and supplied by manufacturer standards consisting of M6 Anchor Fasteners with Vertical Hangers made of Galvanised steel of size 26 x 26 x 25 x 1.2mm with a Galvanised Thickness of 80gsm, A pre Straightened Hanger wire of dia – 2.68 mm of 1.83 m length., thickness of 80gsm and a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8mm thick, galvanised spring steel for 2.68 mm with a minimum pull strength of 110 kg. The adjustable clip also consists of a 3.5 mm aquiline wire to be used with the main runner.</p>					

PART-1 PRICE BID FOR CIVIL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	<p>Aluminum U Shaped Baffle system for Ceiling: Providing & Fixing U Shaped Baffle system consisting of 50 mm Blade widths, 100 mm depth & 3000mm in length made out of Aluminum of minimum 1.5mm thickness. The U shaped Baffles are installed at 200 mm centre to centre distance on the Aluminum Carrier bar.Finishes of Baffle: RAL 9016 PPC with minimum 60 microns paint thickness. Installation: To comprise of 3000 mm long 'carrier bars' manufactured and supplied by the firm to be spaced at 1200mm maximum centers securely anchored to the structural soffit by 6mm/8mm threaded rods. The last hanger at the end of each carrier bar should not be greater than 600mm from the adjacent wall. The U shaped Baffles should be clipped on to the special locking arrangement provided in the carrier bar from below. Two Baffles can be joined together along the lengths using splice joints. The Baffle ends should be closed using matching edge caps.</p> <p>Wooden Ceiling: Providing & Fixing Wooden finish Suspended Ceiling System with WOODWORKS (MICRO LOOK) EDGE TILES WITH 15 MM Silhouette Grid with Black reveal EXPOSED GRID. The tiles with perforation pattern R3 perforation with approved laminate/natural veneer finish should have Humidity Resistance (RH) of 90%, Fire Performance Class 1(BS - 476) in module size of 600mm x 600mm x 12mm The grid should be of make with 15mm wide T - section flanges colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 43mm and a load carrying capacity of 23.71 Kgs/M2. The T Sections have a Galvanizing of 120 grams per M2 & passed through 500 hrs of Salt test. The Tile & Grid system used together should carry a 15 year warranty.</p>				
	<p>INSTALLATION: To comprise main runner spaced at 1200mm centres securely fixed to the structural soffit using suspension system (specifications below) at 1200mm maximum centre. The First/Last suspension system at the end of each main runner should not be greater than 450mm from the adjacent wall.Flush fitting 1200mm long cross tees to be interlocked between main runners at 600mm centre to form 1200 x 600 mm module. Cut cross tees longer than 600mm require independent support. 600 x 600mm module to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200 mm cross tees.Perimeter trim to be special wall angles of size 3000x19x19mm, secured to walls at 450 mm maximum centres.</p> <p>SUSPENSION SYSTEM accessories manufactured and supplied by the firm World Industries consisting of M6 Anchor Fasteners with Vertical Hangers made of Galvanised steel of size 26 x 26 x 25 x 1.2mm with a Galvanised Thickness of 80gsm, A pre Straightened Hanger wire of dia – 2.68 mm of 1.83 m length., thickness of 80gsm and a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8mm thick, galvanised spring steel for 2.68 mm with a minimum pull strength of 110 kg. The adjustable clip also consists of a 3.5 mm aquiline wire to be used with the main runner.</p>				

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
WOODEN WALL PANELING Providing and Fixing Wooden perforated panels of width 600mm, thickness of 12mm and length 800mm or as required by the Architect/ approving engineer, made of a high density particle board substrate with a laminated facing as per the approved shade/ species & finish and a melamine balancing layer on the reverse side. The boards shall have a special perforation pattern where the visible surface has a ("Helmholtz" round perforation dia of 3mm and the reverse side with 12mm with 16mm pitch/oval perforation pattern of 32mm length, 6mm width) each. The panels shall provide a minimum sag resistance of RH90 and a fire rating class of 1 as per Part 7 of BS 476. The edges of the panels shall be grooved to receive splines for installation. The back of the perforated panel shall have sound absorbing non-woven acoustical fleece. The panels shall be mounted on special aluminium splines provided by the firm and approved by the Architect/ Engineer-in-Charge. INSTALLATION: Install wooden battens (provided by others) of section 50mmx50mm or as approved by the Architect on the solid wall horizontally using screws and plugs at spacing of 800mm centre-to-centre. Cut to size and screw the aluminium section frame for border panel (GTITC002) provided by the firm over the lowest and second wooden batten. Install the wooden panels one-by-one by inserting the groove of the panel. Install the aluminium section extruded frame for inside panel (GTITC001) with the longer end away from the inserted panel and shorter edge into the groove of the installed panel. Place this against the wooden batten and screw. Continue installing rows of panels till the actual height/length is achieved. Glue or screw the glass fibre insulation on to the wall in the void formed between the wall and panels, if required. Finish off the edges using wooden moulding of matching colour (provided by others).					

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	<p>Specification Text for Sliding Door Operator:Automatic sliding door operator ES200 EASY:Automatic sliding door operator, modular design, including internal cover.2-panel sliding door.Operator Dimensions (H x T): 100 x 180 mm.Microprocessor control, self-learning, reversing when obstruction is encountered. Clear Passage Width: 2-panel = 800 – 2000 mm Door weight: Bi-Parting Door Panel, max. 2 x 100 kg. Function programs:Program modes: Off, Automatic, Permanent open, Partial opening, Exit only, Selfregulating partial open, Exit only partial opening, Night-bank facility. Compliant with future European standards and specifications per EN 12650.Microprocessor-controlled control unit. Self-learning, with adjustable parameters for opening and closing speed, hold-open time and opening and closing force. With pulse expansion for cheque card or code card reader or key switch. Class of protection IP 20. Produced according to the guidelines for power-operated windows, doors and gates BGR 232, the UVV and the VDE regulations. TÜV design tested, tested according to the lowvoltage guidelines, production according to ISO 9001:2000 certification. Fulfils the DIN V18650 (prEN 12650). DORMA ES200 Operator are of very sturdy design with Self balancing Panel suspension system and with Anti-Jump fitting.</p> <ul style="list-style-type: none"> ☐ Program Function: Off, Automatic, Permanent open, Exit only, Partial open. ☐ Night-bank switch(Optional) – Additional External Operation Switch incase Operator has been Locked, ☐ Adjustable Hold Open Time: Hold Open is easily adjustable at module as per client's requirement, <p>Hold Open Range : 0 – 30 Sec.</p> <ul style="list-style-type: none"> ☐ Adjustable Parameters Via parameter display and selection key at electronic module. Adjustable closing Speed: 10 -40 Cm/S, Adjustable Opening Speed: 10 – 50 Cm/S Hold Open time: 0.5 – 30 Sec, Night Bank Opening time : 0.5 – 30 Sec,Auto Error Display, with Error Code Display for error correction. Read-out error store with error codes. 				

PART-1 PRICE BID FOR CIVIL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	<p>Emergency off – Connection for Emergency Off Button, On activation Operator will Open Fully and Stop all functions, enabling passenger to pass through in case of Panic.</p> <p><input type="checkbox"/> Fail Safe / Fail Secure: Choice between emergency opening(Fail Safe) and emergency closing (Fail Secure) in the event of a power cut (with battery pack).</p> <p>Additional Equipment Integration: <input type="checkbox"/> Connection for External 24V DC supply: Operator can be integrated and also supply operating voltage of 24V DC for one external device e.g. Smoke Detector, alarm system.</p> <p><input type="checkbox"/> Connections for Air-Lock Control.</p> <p>Safety devices:</p> <p><input type="checkbox"/> Inbuilt Obstruction detection feature with automatic reversing cycle on obstruction, dynamic and static force limitation, emergency control unit (emergency stop),</p> <p><input type="checkbox"/> Safety PhotoCells: 1/ 2 Pair of PhotoCells are provided for safety of passenger standing in line of motion of Moving Panel and for through-passage monitoring.</p> <p>Connection:230 V, 50/60 Hz, UPS Supply.</p> <p>Activators:</p> <p>() Radar system 02 Nos, with 24 GHz, Mandatory as Int'Nat Standards</p> <p>() Light barriers, comprising receiver and transmitter -01 Pair</p> <p>Locking:</p> <p>() Electro-mechanical locking, Bistable</p> <p>Operator can be also be integrated with following Systems</p> <p>1. Access Control System with Proximity Card system / Codic Card Reader.</p> <p>Keypad System</p> <p>Biometric sensor system.</p> <p>Push Buttoms</p> <p>Colour light alloy parts:</p> <p>() silver, Anodised E6/C0 - standard.</p>				

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-2 PRICE BID FOR ELECTRICAL WORK

SUMMARY

Sl. No.	<u>SUMMARY OF ELECTRICAL WORK</u>	<u>TOTAL QUOTED AMOUNT</u> (In Rs.)
1	SUBHEAD - I (H.T. PANELS, CSS AND H.T. CABLES)	
2	SUBHEAD - II (L.T. PANEL)	
3	SUBHEAD - III (Pre-Wired MCB DISTRIBUTION BOARDS)	
4	SUBHEAD - IV (WIRING)	
5	SUBHEAD - V (LIGHT FIXTURES)	
6	SUBHEAD - VI (TELEPHONE SYSTEM)	
7	SUBHEAD - VII (COMPUTER AND TV SYSTEM)	
8	SUBHEAD - VIII (LT CABLES & SANDWITCH TYPE RISING)	
9	SUBHEAD - IX (EARTHING)	
10	SUBHEAD - X (LIGHTNING PROTECTION SYSTEM)	
11	SUBHEAD - XI (SOLAR LIGHTING AND ACCESSORIES)	
12	SUBHEAD - XII (FIRE SUPPRESSION SYSTEM)	
13	SUBHEAD - XIII (DISMANTLING OF ELECTRICAL EQUIPMENTS)	
TOTAL COST OF PART-2 ELECTRICAL WORK		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - I (H.T. PANELS, CSS AND H.T. CABLES)					
1	11 KV RING MAIN UNIT				
	Supplying, assembling, erecting, connecting, testing and commissioning of 11KV RMU Compact switchgear unit having 2 No. Isolater load break switchs and 1 No SF 6 circuit breakers enclosed in robotically laser welded non-extensible type stainless steel SF6 enclosure with Self powered relay (IDMTL O/C + E/F) as HT switchgear as per the requirement detailed in the tender documents/SLD.				
	11 KV Ring Main Unit described as above	Set	1		
2	COMPACT SUB - STATION (11KV/0.433 KV, 1000 KVA)				
	Supplying, assembling, erecting, connecting, testing and commissioning of 11 kV Compact Secondary Sub Station outdoor type designed for natural cooling having type tested equipment comprising distribution transformers, SF6 insulated compact switchgear having metal enclosed robotically sealed/welded stainless steel tank , low voltage switchboard, interconnection between HT switchgear & Transformer using single core cables and Transformer to LT switchgear using Al bus bars/Cables factory built / ready for connection type,other associated equipment etc including necessary foundation and earth work etc. without oil pits complete as required conforming to detailed specification laid down in the tender documents. The enclosure shall have modular construction using CRCA sheets and shall be painted with polyurethane paint from the exterior.The enclosure for LT switchgear & HT switchgear shall be provided with IP54 ingress protection. The transformer compartment will have IP23D ingress protection.				
	The transformer used shall be specially designed for low losses (The load losses should be as per ECBC Norms) and shall be hermetically sealed & with corrugated tank.The earthing shall be suitable for 20kA fault current.The varoius combinations of CSS shall be as per details below including necessary foundation and earth work etc				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
(i)	11kV Compact switchgear unit having 1 No SF 6 circuit breakers enclosed in robotically laser welded non-extensible type stainless steel SF6 enclosure with Self powered relay (IDMTL O/C + E/F) as HT switchgear as per the requirement detailed in the tender documents/SLD.				
(ii)	Copper bus bars of 1000 A capacity for HT 11 KV network.				
(iii)	1 No. 11 KV / 0.433 KV, 1000 KVA 3 phase, 50 HZ, DYn11, +5% to -15% ON load tap changer, dry type, outdoor mounting type, hermitically sealed, corrugated wall design low loss transformer with Cu winding and standard fittings. Complete with all protection etc. as required (The load losses should be as per ECBC Norms)				
iv)	Incoming - 1600 Amp 4P MDO ACB, 50 kA , with Microprocessor based self powered O/L, E/F, S/C Relay, Complete with Digital type Multifunctional Meter (V,A,PF,KWH,KVA, KW, KV & THD) with CTs and control MCB, phase indicating lamps LED type, On indication.				
	1000 KVA, 11KV/.433KV CSS complete in all respect described as above	Set	2		
3	H.T. Cable				
	Supply of following sizes of 11kV grade multicore aluminium conductor XLPE armoured power cable as per IS: 7098.				
3.1	3 Core, 240 Sq. mm	Mtrs.	160		
4	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of size exceeding 120 sq. mm but not exceeding 400 sq. mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.	Mtrs.	160		
5	Supplying and making Indoor end termination with cast resin compound including aluminium lugs and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 11 KV grade as required.				
5.1	3 C x 240 Sq. mm.	Nos.	5		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6	Supplying and making Outdoor end termination with cast resin compound including aluminium lugs and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 11 KV grade as required.				
6.1	3 C x240 Sq. mm.	Nos.	1		
7	CONTROL CABLE				
	Supplying, receiving, storing, laying, effecting proper connections, testing and commissioning of the following sizes of 1.1 KV grade PVC insulated copper conductor armoured stranded control cable complete as required and as per specifications.				
7.1	2 core, 2.5 sq.mm Cu. Cable	Mtrs.	50		
7.2	4 core, 2.5 sq.mm Cu. Cable	Mtrs.	40		
8	CONTROL CABLE TERMINATION				
	Termination of the following sizes of PVC insulated Copper conductor cable including providing terminal lugs, single compression gland, crimping the joints, providing insulation tape, effecting terminal connections to the equipment complete as required.				
8.1	2C X 2.5 sq.mm. Cu. Cable	Nos.	8		
8.2	4C X 2.5 sq.mm. Cu. Cable	Nos.	12		
SUB TOTAL OF SUBHEAD - I (H.T. PANELS, CSS AND H.T. CABLES)					

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - II (L.T. PANEL)					
1	MAIN LT PANEL				
	Design, fabrication, supplying, assembling, erecting, connecting, testing and commissioning of dust, damp and vermin proof free floor standing sheet steel enclosed non-drawout moduler type LT Main Panel, fabricated out of suitable sized angle iron and flats, base channel and covered with 2.0mm thick CRCA sheet, duly painted complete with earth bus, aluminium bus bar, numbering & sign writing, interconnection & including the cost of connection through bus bar / copper conductor flexible connection with necessary interlocking with existing panel as shown in drawing as per specification and mounted with the followings. Transformer and DG incomers alongwith buscoupler shall be colour coded compartment. The Panel shall have IP-23 rating.				
	INCOMER				
i)	2 Nos. 1600 A, 415V, 50 KA (Ics=Icu=Icw =50 KA for 1 second), 4 Pole, Electrical draw out type, Micro-processor based release (for over current, Short circuit and Earth fault protections) A.C.B. with all indications, metering, protections, push buttons etc. complete in all respects as mentioned in specifications and as required. (For 2 Nos. CSS - 1000 KVA)				
a)	Digital flush type class -I accuracy multifunction meter showing V, A, PF, KVAR , KWH, THD etc. with 3 Nos. current transformers of 1600/5 ratio, 15 VA Class 1.0 metering and class 5P10 for protection.				
b)	1 Set of three phase R,Y,B indicating lamps along with 2A SP MCB backup protection.				
c)	Control 2A MCB, control terminals & wiring as required.				
d)	27-Undervoltage with definite time relay - 1 No				
e)	1 No. DC under voltage trip relay				
ii)	2 Nos. 1250 A, 415V, 50 KA (Ics=Icu=Icw =50 KA for 1 second),4 Pole, Electrical draw out type, Micro-processor based release (for over current, Short circuit and Earth fault protections) A.C.B. with all indications, metering, protections, push buttons etc. complete in all respects as mentioned in specifications and as required. (For DG Set 1&2- 750 KVA)				
a)	Digital flush type class -I accuracy multifunction meter showing V, A, PF, KVAR , KWH etc. with 3 Nos. current transformers of 1250/5 ratio, 15 VA Class 1.0 metering and class 5P10 for protection				
b)	1 Set of three phase R,Y,B indicating lamps along with 2A SP MCB backup protection.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
c)	Control 2A MCB, control terminals & wiring as required.				
d)	27-Undervoltage with definite time relay - 1 No				
e)	1 No. DC under voltage trip relay				
iii)	400 A, 415V, 50 KA (Ics=Icu=Icw =50 KA for 1 second),4 Pole, Electrically Operated and interlocked, Micro-processor based release (for over current, Short circuit and Earth fault protections) MCCB with all indications, metering, protections, push buttons etc. complete in all respects as mentioned in specifications and as required. (From 200KVA DG-3))				
a)	Digital flush type class -I accuracy multifunction meter 0-400A ,showing V,A,KWH,KVAR,PF etc.with 3 Nos. current transformers of 400/5 Amp ratio, 15 VA Class 1.0 metering.				
b)	1 Set of three phase R,Y,B indicating lamps along with 2A SP MCB backup protection.				
c)	Control 2A MCB, control terminals & wiring as required.				
d)	27-Undervoltage with definite time relay - 1 No				
e)	RPR-Reverse power relay - 1 No				
f)	1 No. DC under voltage trip relay				
	Bus Coupler				
i)	1600 A, 415V (Ics=Icu=Icw 50 KA for 1 second), 4 Pole, EDO ACB Electrically interlocked, with all indications, push buttons etc. complete in all respects as mentioned in specifications and as required:-				
	1 Set of ON/Trip indicating lamps .				
	1 No. DC under voltage trip relay				
ii)	400 A, 415V (Ics=Icu=Icw 50 KA for 1 second), 4 Pole, Electrically operated and interlocked MCCB, with all indications, push buttons etc. complete in all respects as mentioned in specifications and as required:-				
	1 Set of ON/Trip indicating lamps .				
	1 No. DC under voltage trip relay				
	Bus Bar				
	2000A, 50 KA TPN Aluminium Bus bar for section-1 and 2000A,50 KA TPN Aluminium Bus bar for section-2 and 500A, 50 KA TPN Aluminium Bus bar for section-3 with extendable arrangement - 1 Set				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	Outgoing:-				
	Following rated 415V, MCCB's with overcurrent and short circuit releases, all indication, front operating handle & door interlock with Multi Meter with Volt, Amp and KWH etc. complete in all respects as mentioned in specifications and as required For each outgoing: (All MCCB of 50 KA Rating)				
	(Bus Section-1)				
a)	630A 50 KA TP MCCB - 1 Nos.(1 No. for Capacitor panel)				
b)	630A 50 KA 4P MCCB - 3 Nos.(1 No. for HVAC Panel + 1 No. for UPS Panel+1 No. Spare)				
c)	400A 50 KA 4P MCCB - 1 Nos.(1 No. for Fire Fighting panel)				
d)	250A 50 KA 4P MCCB- 2 No - (1 No. for Power R.M.1(G+5) + Spare)				
e)	100A 50 KA 4P MCCB - 5 No.(1 No. for Ventilation Panel+1 No. for Lift Panel + 1No. Equipment Panel+ 1 No. for Kitchen Equipment + Spare)				
f)	63A 50 KA 4P MCCB - 4 No. (1 No. for Ventilation Panel + 2 Nos. Lifts + Spare)				
	(Bus Section-2)				
a)	800A 4P MDO 50 KA ACB - 2 No. (for HVAC Panel (G+2 + Spare)				
b)	630A 50 KA TP MCCB - 1 Nos.(1 No. for Capacitor panel)				
c)	630A 50 KA 4P MCCB - 3 Nos.(1 No. for HVAC panel (G+5) +1 No. for UPS Panel+1 No. Spare)				
d)	400A 50 KA 4P MCCB - 1 Nos.(1 No. Spare)				
e)	160A 50 KA 4P MCCB - 2 Nos.(1 No. for Power R.M.2(G+2) + 1 No. Spare)				
f)	100A 50 KA 4P MCCB - 1 No.(1 No. for Lift Panel)				
g)	63A 50 KA 4P MCCB - 2 No. (For 2 Lifts)				
	(Bus Section-3)				
a)	125A 50 KA 4P MCCB - 3 Nos.(1 No. for light R.M.-1+ Plumbing Panel + Spare)				
b)	100A 50 KA 4P MCCB - 4 Nos.(1 No. for light R.M.-2 + STP + Solar Panel+ Spare)				
c)	63A 50 KA 4P MCCB - 3 No.(2 No.Ext. Lighting +1 No.Spare)	Set	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
2	Capacitor Panel (320 KVAR)				
	Supplying, assembling, erecting, connecting, testing and commissioning of dust, damp and vermin proof free floor standing factory built sheet steel enclosed non drawout modular type thyrestor operated automatic L.T. power factor correction panel, fabricated out of suitable sized angle iron and flats, base channel and covered with 2.0mm thick PCRC sheet, with aluminium bus bars as per attached specifications duly painted complete with earth bus bar and mounted with the followings :				
a)	Necessary solid state binary type power factor sensing and correction relay (12 stages) complete with CT.s and its all other accessories etc. as required.				
b)	Necessary thyristor controls, meters, control circuits etc. as required and specified in detail specifications				
c)	630 Amp 50 KA MCCB 3 Pole - 1 No.				
d)	L.T. Power factor improving capacitors of indoor type suitable for operation on 415 V, AC 3 phase 50Hz complete with banking arrangement, interconnections with suitable size of copper conductor PVC insulated PVC sheathed unarmoured cable, discharge resistance etc. as required.				
i)	Bank of 5 KVAR rating each with 32 amp TP MCCB - 2 Set				
ii)	Bank of 10 KVAR rating each with 32 amp TP MCCB -1 Set				
ii)	Bank of 20 KVAR rating each with 63 amp TP MCCB - 4 Set				
iii)	Bank of 50 KVAR rating each with 100 amp TP MCCB - 2 Set				
iv)	Bank of 100 KVAR rating each with 200 amp TP MCCB - 1 Set				
v)	Bank of 20 KVAR rating (Fixed) with 63 amp TP MCCB - 1 Set				
	Complete panel described as above	Set	2		
3	MV PANELS				
	Design, fabrication, supplying, assembling, erecting, testing and commissioning of wall mounted /floor mounted cubical type compartmentalised dust, damp & vermin proof <u>Floor Distribution Panel</u> fabricated out of suitable sized angle iron and flats and covered with 2mm thick cold rolled CRCA sheet painting etc. complete with Al. bus bars, interconnection with solid/stranded copper conductor wires copper strips neutral links, etc. and mounted with with 1 No 0-500V, Voltmeter, selector switch, 1 set (3 Nos) of phase indicating lamps, ammeter with CTs etc. as required. The Panel shall have IP-23 rating .				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.1	POWER FLOOR PANELS (GF,FF,SF,TF,4F,5F)				
	INCOMER:				
a)	1 No. of 100 Amp 4P MCCB of 35 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back-up.				
b)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
c)	(0 - 100 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 100/5A ,15VA burden & accuracy class of 1.0 - 1 set				
d)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBAR:				
	150 Amp. TPN, 35 kA, Al. Bus Bar				
	Outgoings:-				
	Following rated 415V, MCCB's with overcurrent and short circuit releases, all indication, front operating handle & door interlock complete in all respects as mentioned in specifications and as required. For each outgoing:				
	63A 4P MCB of 16 kA Breaking Capacity - 4 Nos.				
	Power Distribution Panel describe as above	Set	6		
3.2	LIGHT FLOOR PANELS (GF,FF,SF,TF,4F,5F)				
	INCOMER:				
a)	1 No. of 63 Amp 4P MCB of 16 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back-up.				
b)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
c)	(0 - 63 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 63/5A ,15VA burden & accuracy class of 1.0 - 1 set				
d)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBAR:				
	100 Amp. TPN, 35 kA, Al. Bus Bar				
	Outgoings:-				
	40A 4P MCB of 10kA Breaking Capacity - 4 Nos.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	Light Distribution Panel describe as above	Set	6		
3.3	UPS FLOOR PANELS (GF,FF,SF,TF,4F,5F)				
	INCOMER:				
a)	1 No. of 63 Amp 4P MCB of 16 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back-up.				
b)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
c)	(0 - 63 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 63/5A ,15VA burden & accuracy class of 1.0 - 1 set				
d)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBAR:				
	100 Amp. TPN, 35 kA, Al. Bus Bar				
	Outgoings:-				
	40A 4P MCB of 10kA Breaking Capacity - 4 Nos.				
	Light Distribution Panel describe as above	Set	6		
3.4	SOLAR OUTPUT PANELS				
	INCOMER:				
a)	1 No. of 63 Amp 4P MCB of 16 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back-up.				
b)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
c)	(0 - 63 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 63/5A ,15VA burden & accuracy class of 1.0 - 1 set				
d)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBAR:				
	100 Amp. TPN, 35 kA, Al. Bus Bar				
	Outgoings:-				
	40A 4P MCB of 10kA Breaking Capacity - 2 Nos.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	32A 4P MCB of 10kA Breaking Capacity - 5 Nos.				
	Light Distribution Panel describe as above	Set	1		
3.5	SOLAR PANELS				
	INCOMER:				
a)	1 No. of 100 Amp 4P Changeover switch				
b)	1 No. of 100 Amp 4P MCCB of 16 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back up.				
c)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
d)	(0 - 63 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 63/5A ,15VA burden & accuracy class of 1.0 - 1 set				
e)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBAR:				
	100 Amp. TPN, 35 kA, Al. Bus Bar				
	Outgoings:-				
	63A 4P MCB of 10kA Breaking Capacity - 4 Nos.				
	SOLAR Panel describe as above	Set	1		
3.6	SOLAR OUTPUT PANELS				
	INCOMER:				
a)	1 No. of 63 Amp 4P MCB of 16 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back-up.				
b)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
c)	(0 - 63 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 63/5A ,15VA burden & accuracy class of 1.0 - 1 set				
d)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBAR:				
	100 Amp. TPN, 35 kA, Al. Bus Bar				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	Outgoings:-				
	40A 4P MCB of 10kA Breaking Capacity - 2 Nos.				
	32A 4P MCB of 10kA Breaking Capacity - 7 Nos.				
	SOLAR Distribution Panel describe as above	Set	1		
4	LIFTS PANEL - 1&2				
	Supply, installation, testing and commissioning of following M.V. cubicle type totally enclosed, free standing type, dust, damp and vermin proof, Distribution Board/Panel complete with busbars, M.V. danger notice plate, interconnections with suitable capacity aluminium leads/ solid aluminium strips/rods, connection of incoming and outgoing cables with thimbles, powder coat painted and having following incoming and outgoing switchgears complete as required.				
	INCOMER:				
a)	1 No. of 100 Amp 4P MCCB of 16 kA Breaking capacity with On Indicating Lamp with 2A SP MCB back up.				
b)	Coloured (Red, Yellow, Blue) phase indicating lamp - 1 set				
c)	(0 - 100 A) CT operated Ammeter with selector switch & 3 nos. CTs ratio 60/5A ,15VA burden & accuracy class of 1.0 - 1 set				
d)	0-500 V Voltmeter with selector switch - 1 set				
	BUSBARS:				
	100 Amp TPN Aluminium busbars				
	OUTGOING:				
	3 Nos. 63 Amp 4P MCB, with phase indicating lamps.				
	20A DP MCB - 2 No.				
	Lift Panel describe as above	Set	2		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	UPS PANELS				
	Supply, Installation, Testing & Commissioning of cubicle type panel made out of 2mm thick CRCA sheet, totally enclosed, IP 42, floor/wall mounted with channel base frame, dust and vermin proof, indoor, compartmentalized, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system making interlocking arrangement between incomers & bus coupler breakers, including control wiring with 2.5 sq mm size FRLS wires/cable, interconnection, duly powder coated painting etc. including supply & installation of following switchgears, metering instruments and accessories as per specifications.				
5.1	UPS INPUT PANEL FOR DOMESTIC TERMINAL:				
	INCOMER:				
	2 Nos. 500 Amp 415 volts, Four Pole, 25 KA MCCB with built in thermal based release unit with adjustable setting.				
	BUSBARS:				
	600 Amp 4P Copper busbars				
	INSTRUMENTS				
	1 No. 0 to 500 V voltmeter with selector switch.				
	1 No. 0 to 500 Amp ammeter with selector switch with 500/5A C.T.'s				
	1 Set of RYB phase indicating lamp with 2A MCB				
	OUTGOING:				
	4 Nos. 200 Amp 415 volts, Four Pole, 35 KA MCCB with built in thermal based release unit with adjustable setting.				
	3 nos, 0-200 Amp ammeter with 400/5A CT's of CL-1, 15VA				
	UPS Input Panel described as above.	Set	1		
5.2	UPS OUTPUT PANEL:				
	INCOMERS:				
	3 Nos. 200 Amp 415 volts, Four Pole, 35 KA MCCB with built in thermal based release unit with adjustable setting.				
	INSTRUMENTS				
	3 No. 0 to 500 V voltmeter with selector switch.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	3 No. 0 to 200 Amp ammeter with selector switch with 200/5A C.T.'s				
	3 Set of RYB phase indicating lamp with 2A MCB				
	BUSBARS:				
	600 Amp 4P Copper busbars				
	OUTGOING:				
	500 Amp 415 volts, Four Pole, 35 KA MCCB with built in thermal based release unit with adjustable setting.				
	1 no, 0-200 Amp ammeter with 600/5A CT's of CL-1, 15VA				
	UPS Ouput Panel described as above.	Set	1		
5.3	UPS DISTRIBUTION PANEL:				
	INCOMERS:				
	BUSBARS:				
	600 Amp 4P Copper busbars				
	INSTRUMENTS				
	1 No. 0 to 500 V voltmeter with selector switch.				
	1 No. 0 to 200 Amp ammeter with selector switch with 500/5A C.T.'s				
	1 Set of RYB phase indicating lamp with 2A MCB				
	OUTGOING:				
	2 Nos. 200 Amp 415 volts, Four Pole, 35 KA MCCB				
	2 Nos. 100 Amp 415 volts, Four Pole, 35 KA MCCB				
	2 Nos. 63 A. 4 pole MCB				
	2 Nos. 40 A. FP MCB				
	UPS Panel described as above.	Set	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6	Supplying, assembling, erecting, testing and commissioning of wall mounted /floor mounted cubical type compartmentalised dust, damp & vermin proof distribution board fabricated out of suitable sized angle iron and flats and covered with 2mm thick cold rolled CRCA sheet steel, painting etc. complete with copper bus bars, interconnection with solid/stranded copper conductor wires copper strips neutral links, etc. as required. (KITCHEN L+PDB)				
	Incoming				
a)	100A, 4P Isolator - 1 No.				
b)	Phase indicating lamp - 1 Set				
	Outgoing				
a)	32A TPN MCB-5 Nos				
b)	32A SP MCB-7 Nos				
c)	25A SP MCB - 5Nos.				
d)	20A SP MCB - 6 Nos.				
e)	10A SP MCB - 4 Nos.				
	KITCHEN L+PDB Panel described as above.	Set	1		
SUBHEAD - II (L.T. PANEL)					
SUBHEAD - III (Pre-Wired MCB DISTRIBUTION BOARDS)					
1	S/F prewired TP MCB DB:				
	Supplying and fixing following way prewired TP&N MCB distribution board of steel sheet for 415 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator				
1.1	4 way (4 +12), Double door, horizontal type	Nos.	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.2	6 way (4 + 18), Double door, horizontal type	Nos.	1		
1.3	8 way (4 + 24), Double door, horizontal type	Nos.	1		
1.4	12 way (4 + 36), Double door, horizontal type	Nos.	42		
2	S/F prewired SP MCB DB:				
	Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator)				
2.1	2+12 way , Double door, horizontal type	Nos.	10		
2.2	2+8 way , Double door, horizontal type	Nos.	1		
3	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required				
3.1	Single pole	Nos.	1714		
3.2	TP	Nos.	2		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
4	S/F TP MCB isolator:				
	Supplying and fixing following rating, FP, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
4.1	40 amps	Each	28		
4.2	63 amps	Each	17		
5	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Nos.	10		
6	S/F DP MCB isolator:				
	Supplying and fixing following rating, DP, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
6.1	40 amps	Each	11		
7	S/F RCCB:				
	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
7.1	40 amps	Nos.	95		
7.2	63 amps	Nos.	51		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
8	S/F Vertical type TP MCB DB				
	Supplying and fixing following way prewired vertical type TP&N MCB distribution board of steel sheet for 415 volts on surface/ recess complete with loose wire box of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, terminal connectors for all incoming and outgoing circuits, duly prewired with adequate size of FR PVC insulated copper conductor upto the terminal connector/ neutral link, earthing etc as required (But without MCB/ RCCB/ Isolator).				
8.1	12 way Double door	Nos.	1		
9	ISOLATOR PANEL BOXES				
9.1	Supplying, assembling, erecting, testing and commissioning of wall/ floor mounted Isolator box with enclosure and 1 No. 63 AMP, 4P MCCB.	Each	1		
9.2	Supplying, assembling, erecting, testing and commissioning of wall/ floor mounted Isolator box with enclosure and 1 No. 100 AMP, 4P MCCB of 25 KA.	Each	1		
10	Supplying, Installing , testing and commissioning of Timer Switch to controlled the lights for timely switch off the lights in the office areas .	Each	22		
SUB TOTAL OF SUBHEAD - III (Pre-Wired MCB DISTRIBUTION BOARDS)					
SUBHEAD - IV (WIRING)					
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed steel conduit with modular switch, modular plate, suitable GI box including Ceiling fan box with hook for fan point and earthing the point with 1.5 sq. mm FR PVC insulated copper conductor single core cable etc as required - Group C				
a)	Circuit wiring with 2 x 1.5 sq. mm + 1 x 1.5 sq. mm (for earthing) PVC insulated copper conductor wires in ISI marked MS Conduit (including supplying and laying MS conduit) from MCB Distribution Board to Switchboard(s)				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
b)	Wiring with 2 x 1.5 sq. mm + 1 x 1.5 sq. mm (for earthing) PVC insulated copper conductor wires in ISI marked MS Conduit (including supplying and laying MS conduit) from Switchboard to Light/Fan/Exhaust fan/Call bell Points or from one switchboard to another switchboard.				
c)	Supplying and Fixing Modular type switches (modular Bell push in case of call bell points) in suitable size modular metal boxes, base plate & modular cover plates & sensors for Diagnostic Blocks.				
d)	Supplying and fixing Hexagonal fan Boxes in case of Fan Points.				
e)	Supplying & Fixign Ceiling Rose in case of Exhaust Fan Points.				
Note:					
i)	Unless otherwise specified all the conduiting work to be done in recess				
ii)	Two or more circuit can be drawn in the same conduit, however, all the circuits in the same conduit shall be on the same phase.				
iii)	Circuit wiring and point wiring will be in a separate conduit.				
iv)	Minimum size of conduit will be of 25 mm dia.				
	Wiring as mentioned above	Point	3200		
2	Wiring for twin control light point with 1.5 sq. mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq. mm FR PVC insulated copper conductor single core cable etc as required.	Point	30		
3	Wiring for power plug with 2 x 4 sq. mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit along with 1 No. 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Mtr.	3200		
4	Wiring for power with 4 x 4 sq. mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit along with 2 Nos. 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Mtr.	1550		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Wiring for light plug with 2 x 1.5 sq. mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit along with 1 No. 1.5 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Mtr.	5680		
6	Wiring for light plug with 4 x 1.5 sq. mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit along with 2 Nos. 1.5 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Mtr.	5900		
7	Wiring for circuit/submain wiring along with earth wire with the following sizes of FR PVC insulated, Copper conductor, single core cable in surface/recessed steel conduit as required.				
7.1	2 x 1.5 Sq. mm. + 1X 1.5 sq. mm earth wire	Mtr.	15		
7.2	2 x 2.5 Sq. mm. + 1X 2.5 sq. mm earth wire	Mtr.	3480		
7.3	4 x 2.5 Sq. mm. + 2X 2.5 sq. mm earth wire	Mtr.	3480		
7.4	2 x 4 Sq. mm. + 1X 4 sq. mm earth wire	Mtr.	10		
7.5	2 x 6 Sq. mm. + 1X 6 sq. mm earth wire	Mtr.	10		
7.6	2 x 10 Sq. mm. + 1X 10 sq. mm earth wire	Mtr.	10		
7.7	4 x 6 Sq. mm. + 2X 6 sq. mm earth wire	Mtr.	10		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
7.8	4 x 10 Sq. mm. + 2X10 sq. mm earth wire	Mtr.	10		
7.9	4 x 16 Sq. mm. + 2X 16 sq. mm earth wire	Mtr.	10		
7.10.	4 x 25 Sq. mm. + 2X 25 sq. mm earth wire	Mtr.	10		
7.11.	4 x 35 Sq. mm. + 2X 35 sq. mm earth wire	Mtr.	10		
8	Supplying and fixing suitable size GI Box with modular plate and cover in front on surface or in recess including providing and fixing 3 Pin 6 Amps modular socket outlet and 6 amps modular switch, connection, painting etc as required (For light plugs to be used in non residential buildings	Each	2250		
9	Supplying and fixing suitable size GI Box with modular plate and cover in front on surface or in recess including providing and fixing 6 Pin 6/16 Amps modular socket outlet and 16 amps modular switch, connection, painting etc as required.	Each	243		
10	Supplying and fixing 20 Amps., 240 volts, SPN industrial type, socket outlet, with 2 pole and earth metal enclosed plug top alongwith 20 Amps., 'C' Curve, SP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc as required.	Each	1		
11	Supplying and fixing 20 Amps. 415 V TPN industrial type, socket outlet, with 4 pole and earth metal enclosed plug top alongwith 20 Amps., 'C' Curve, TP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc as required.	Each	1		
12A	Floor Trunking				
	Supply, assembly and laying of under floor trunking (including cutiing of floor and making it good after finishing), made out of 1.6mm thick GI sheet complete with joints, horizontal bends, floor junction box, vertical bends, level adjustment components and closer, vertical elbow, covers etc. of following sizes.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
12.1	300 mm x 38 mm (3 compartment)	RM	130		
12.2	250 mm x 38 mm (3 compartment)	RM	25		
12.3	225 mm x 38 mm (3 compartment)	RM	285		
12.4	150 mm x 38 mm (2 compartment)	RM	624		
12.5	100 mm x 38 mm (1 compartment)	RM	820		
12.6	50 mm x 38 mm (1 compartment)	RM	1670		
12B	Supply and fixing of Three compartment UPVC Trunking suitable for power and data cable management system directly on wall of size 100mm X 50 mm complete with Cable dividers, Retainers, Joint covers, internal & external Couplers, End Cap, all hardware and accessories ,end caps etc. as required.The Trunking should be suitable for fixing of power plug points and data points at any desired location and should have the knockouts for wiring . The material should be non-corrosive and excellent resistance to minerals, acid, alkalies and detergents.Materials should be non-flamable with the requirements.	RM	90		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
12C	Supply and fixing of Three compartment UPVC Trunking suitable for power and data cable management system directly on wall of size 50mm X 50 mm complete with Cable dividers, Retainers, Joint covers, internal & external Couplers, End Cap, all hardware and accessories ,end caps etc. as required.The Trunking should be suitable for fixing of power plug points and data points at any desired location and should have the knockouts for wiring . The material should be non-corrosive and excellent resistance to minerals, acid, alkalis and detergents.Materials should be non-flamable with the requirements.	RM	40		
13	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32amps 240 volts "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	Each	1		
14	Supplying and fixing TP sheet steel enclosure on surface/ recess along with 16/25/32amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required.	Each	1		
15	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	1		
16	Supplying and fixing 20 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 20 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	1		
17	Supplying and fixing 30 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	1		
SUB TOTAL OF SUBHEAD - IV (WIRING)					

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - V (LIGHT FIXTURES)					
1	Supply of following light fixture complete with high efficiency electronic ballast, starter, capacitor, tubes/lamps, reflector, diffuser, MS body/housing holder etc.complete with all fixing accessories as required.				
1.1	Recessed mounted 4 x 14 watt TL5 Light Fixture suitable for and with 4x14W TL5 lamp with High Transitivity thermoformed Opal diffuser which offers DLOR>72%, High Reflectivity & Low glare Back reflector resulting glare free soothing light with high frequency Performer Ballast (Philips RC 795B 4x14W TL5 make)	Each	800		
1.2	1x28 watt TL5 Wall/Ceiling mounted Light Fixture suitable for and with 1x28W TL5 lamp with Robust construction with CRCA sheet steel powder coated base plate and cover. Weld-free construction, Polycarbonate end caps which support the holder assembly, (Philips TMS122 M 1xTL5-28W EBT make)	Each	70		
1.3	Recessed mounted type 1x18 watt downlighter Light Fixture suitable for and with 1x18W PL lamp with Cast aluminium ring, Satin-finish, anodised aluminium reflector for low glare, Horizontal lamp position which renders higher light output, Wide mounting ring for hiding false ceiling cut out imperfections. (Philips FBH145M 1XPL-C/2P18 make)	Each	107		
1.4	Recessed mounted type 2x28 Watt Light Fixture suitable for and with 2x28W TL5 lamp with D8 Micro-optics with excellent glare control, designed for UGR 19, Indirect optics, The high efficiency optical system offers the best package for excellent uniformity and glare control. (Philips TPH 824 2xTL5-28W EBP D/I D8 make)	Each	8		
1.5	Recessed type LED module Light Fixture with high efficiency optical system ensuring an effective low glare lighting solution, high efficiency white reflector, high transmissive diffuser, 40,000 burning hours at L70. (Philips BBS170 1XDLED-5000PSU WH LED MODULE LIGHT make)	Each	465		
1.6	Bulk Head Light Fixture suitable for and with 1x9W PL lamp with Single piece die-cast aluminium housing and glass retaining frame offer excellent corrosion resistance, acrylic cover together with gasket offer excellent protection against dust and moisture, Wire Gaurd made form powder coated MS protects luminaire from damage.(Philips - FXC101 1xPL-S / 2P 9W AC GR make)	Each	52		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.7	Mirror Light Fixture suitable for and with 1x14W TL5 lamp with Slim, robust, non-corrosive housing, Instant flicker free start. (Philips VECTOR 14W TCH207 make)	Each	33		
1.8	Recessed mounted type 1x13 W watt Light Fixture suitable for and with 1x13W PL lamp with Cast aluminium ring, Satin-finish, anodised aluminium reflector for low glare, Horizontal lamp position which renders higher light output, Wide mounting ring for hiding false ceiling cut out imperfections. (Philips - FBH 145M1xPL-C/2P13W/240V make)	Each	142		
1.9	Recessed mounted type 2x18 W watt Light Fixture with Housing made up of CRCA sheet steel with powder coating, Bright patterned reflector with serration at the bottom for wide distribution, Intermediate diamond and gloss finish on top offers higher light output, Wide CRCA ring covers false ceiling cut out imperfections. (Philips FBS 095 P 2XPLC/18W HF make)	Each	111		
1.10	1x18 W watt Surface mounted Light Fixture for Stairs suitable for and with 1x18W PL lamp with Cylindrical aluminium housing with serrations and matte black powder coated, Electrochemical brightened reflector with combination of patterns having diamond. (Philips - FCS 100 1xPL-C/2P18 make)	Each	60		
1.11	Picture Light 1x10 W watt LED Light Fixture with Replacement for 50W 12V Halogen lamps, 80% energy saving, Dimmable with recommended dimmers, Retrofits for conventional MR16 fixtures, Long lifetime of 25,000 hours. (Philips MR16 LED 10W alongwith QBS 024 make)	Each	694		
1.12	1x18 W Landscape downlighter Light Fixture suitable for and with 1x18W PL lamp with Cast aluminium ring, Satin-finish, anodised aluminium reflector for low glare, Horizontal lamp position which renders higher light output, Wide mounting ring for hiding false ceiling cut out imperfections. (Philips FBH 145 1x18W make)	Each	191		
1.13	Decorative, architectural surface-mounted ceiling and wall luminaire. With annular mattopal PMMA diffuser. For 2 fluorescent lamps T5 TR 40 W, circular, socket 2GX13. Diffuser with precise contours and finely structured, matt decorative surface with design effect. With inner secondary reflector and front lamp shielding for high secondary light component. Die-cast aluminium luminaire body, white powder-coated. Protection rating IP50. With electronic control gear. (Trilux make Polaron WD2 2TR40E make)	Each	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.14	Decorative, architectural surface-mounted ceiling and wall luminaire. With annular mattopal PMMA diffuser. For 2 fluorescent lamps T5 TR 40 W, circular, socket 2GX13. Diffuser with precise contours and finely structured, matt decorative surface with design effect. With inner secondary reflector and front lamp shielding for high secondary light component. Die-cast aluminium luminaire body, white powder-coated. Protection rating IP50. With electronic control gear.(Trilux make Polaron WD2 2TR40E +WD2 C1 make)	Each	72		
1.15	1x 28 W Line Light Fixture suitable for and with 1x28W TL5 lamp with housing made of extruded aluminium with pressure die-cast aluminium end caps, diffuser made of thick PMMA of very high quality to get excellent diffused lighting experience, Electronic, high frequency performer ballast with P.Fof approx 0.99.(Philips TPX 311 1X28WTL5 EB-O-SAT Line Light make	Each	113		
1.16	1x 75 W Ceiling Mounted Light Fixture with dimmable ballast with smart pyramid optics and office glare rating complain for Board Room. (Philips RC- 600B-40S-W30L120 1XPPI-I Xitanium 75W make)	Each	11		
1.17	Recessed luminaire. With decorative opal PMMA diffuser. For 4 fluorescent lamps T5 14 W, socket G5. Diffuser with finely structured surface. For especially high transmission value and light output ratio. With characteristic double convex wave design. Projecting on room side for decorative ceiling illumination, for increased lighting comfort. Diffuser fixed into luminaire body without tools, snapped-in at two different depths. Luminaire body in sheet steel, white. Powder-coated solvent-free. For ceilings with concealed or exposed grids. Axis dimensions 600mm. For ceiling cut-out 580 mm x 580 mm. Protection rating IP40. With electronic control gear. (Trilux make Livity 600 OT 414 E01 or Philips voice 3x14 T5 make)	Each	19		
1.18	Diffuser Open Light - Suspended prismatic decobay luminaire suitable for and with 1x18W PL lamp with Housing made up of extruded Al with silver gray powder coating, special prismatic Polycarbonate dome for providing functional as well as Uplighting, Gear Tray inside housing contains all the electrical accessories,all pre-wired up to terminal block. (Philips FPK 550 2xPL-C/2P 26W1 make	Each	44		
1.19	Frame Light suitable for CDM-R 35 W lamp with Pressure die-cast aluminium frame. Provides excellent finish and long life. (Philips GGH 111 frame and QBX x1101xPAR30 make)	Each	105		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.20	Recessed Type 1x60 W TL5 Light Fixture suitable for and with 1x 60W TL5 lamp with semi-high-gloss aluminum centerpiece, opal lamp cover, high-reflectance optic, made out of one single piece of material. (Philips TPS 740 1XTL5C 60W HFP make)	Each	20		
1.21	LED recessed luminaire with decorative opal PMMA diffuser. Structured surface, flat, projecting into room With 4 LED panels for even illumination of the diffuser. Total connected load 50 W. Neutral white light colour (nw), 4000K. Service life > 50,000 hours. Luminaire luminous flux 3900 lm. Decorative ceiling illumination also softens contrast on the ceiling. Diffuser fits into luminaire body at two different mounting positions without tools. Sheet steel, white. Powder-coated solvent-free. Can be universally used in cut-out recess openings and in ceiling systems with concealed or exposed grids. Module size 600 mm, along with Electronic control gear, (TRILUX cat No. Liventy Flat 600 OT LED3900nw ET 01 make)	Each	14		
1.22	Artisto Mirror optic surface mounted suspended type 2X28 W Light Fixture suitable for and with 2x28W TL5 lamp with Housing made of epoxy polyester powder coated CRCA sheet, having technology of 3D OLC (Omni-directional Luminance Control) with perforated in-fill panel. (Philips TPS 610 2xTL-5-28W DI HFP 228 make)	Each	14		
1.23	Recessed mounted type 3x14 watt Light Fixture suitable for and with 3x14W TL5 lamp with Housing made up of CRCA sheet steel, D6 optics with High gloss matte optic for all-round glare and beam control. (Philips TBS 669M-3XTL-514W EBP D6 make)	Each	16		
1.24	1x28 W Cove Light Fixture suitable for and with 3x14W TL5 lamp with Robust construction with CRCA sheet steel powder coated base plate and cover. Weld-free construction, Polycarbonate end caps which support the holder assembly, (Philips VECTOR NEO TMS 122 1XTL-5 28W make)	Each	294		
1.25	Surface/ Wall mounted step Light Fixture suitable for and with 2x18 W PL Lamp with Die-cast construction, UV stabilised Polycarbonate diffuser, Durable silicon rubber gasket and UV stabilised vandal-proof.(Philips DCP711 2xPLC/2P-18W make)	Each	12		
1.26	1x 35 W Track Light fixture suitable for and with 1x35W CDMT lamp with robust adjustment system, with a gradient indicator for precise beam angle definition. (Philips MR 501 CDMT 1x35W 36-3C make)	Each	9		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.27	13 W watt LED Light Fixture with dimmable ballast with color rendering complaint CR180, UGR19, lumen efficacy>70lm/W, IP54 protection for the front part.(Philips BBS480 1xDLED-4000 PSD-E GR make)	Each	19		
1.28	Light ceiling module, round version with connected load of 472W,for recessed ceiling installation in ceiling cut-outs. Ø 1300 mm. For 9 T5 fluorescent lamps. Aluminium luminaire body, white coated. 193 mm high. Backlit diffuser on room side with opal stretched film, accessible, low flammability. With digitally dimmable electronic control gear (DALI), lamps can be separately switched. For single-channel control. (Trilux make Plenar C1-R 1300EDDW make)	Each	7		
1.29	Fascade Lighting Fixture suitable for 2x SONT 250 W lamp with Housing made of pressure die-cast aluminium alloy for sturdiness and better corrosion resistance, lamp compartment comprising of electrochemically brightened, high purity, pre anodized aluminium reflector for high efficiency, Heat resistant EPDM gaskets bonded to the front cover renders the luminaire an ingress protection of IP 65 pecially designed power coated mounting bracket with graduating disk for ease of mounting and aiming. (Philips Nocturne- RVP 302 2xSONT 250W make)	Each	8		
2	Installation, testing and commissioning of pre-wired, fluorescent fittings/fitting /compact flourescent fitting of all types complete with all accessories and tube etc. directly on ceiling/wall, including connection with 1.5 sq mm FR PVC insulated, copper conductor, single core cable and earthing etc as required	Each	3493		
3	Installation, testing and commissioning of prewired, fluorescent fittings/fitting /compact flourescent fitting of all types complete with all accessories and tube etc. including supplying and fixing ball and socket arrangements, 2 no. down rods of 20 mm dia X 1.6 mm thick steel conduit up to 30 cm length, painting and wiring the down rods and connecting with 1.5 sq mm FR PVC insulated, copper conductor, single core cable and earthing etc as required	Each	10		
4	Supply of following sizes of heavy duty exhaust fan suitable for single phase 230 volts, 50 Hz., AC supply complete with motor, louvers/shutters etc. complete as required.				
4.1	300 mm. Dia., 1400 RPM	Each	39		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connections, testing, commissioning etc. as required.	Each	39		
6	Extra for fixing the louvers / shutters complete with frame for exhaust fans of all sizes.	Each	39		
7	Supply, installation, Testing and commissioning of Occupancy sensor with dual output (for control the light and AC indoor unit), adjustable photo cell, 7meters detection range (at height of 2.5 mtrs at normal condition), adjustable off delay time and maximum load of 6 amps per output.	Each	294		
SUB TOTAL OF SUBHEAD - V (LIGHT FIXTURES)					
SUBHEAD - VI (TELEPHONE SYSTEM)					
1	Supply and fixing of following sizes of ISI marked steel conduit alongwith the accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of conduit in recessed as required.				
1.1	20 mm dia	Metre	300		
1.2	25 mm dia	Metre	9200		
2	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
2.1	Telephone socket outlet	Each	670		
3	Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.1	1 or 2 Module (75mm X 75mm)	Each	670		
4	Supplying, Installation, testing and commissioning of following sizes of telephone distribution board in M.S. hinged type box duly painted complete with Krone make tag block etc. including terminations of cable as required.				
4.1	10 Pair	Each	4		
4.2	20 Pair	Each	2		
4.3	50 Pair	Each	4		
4.4	100 Pair	Each	8		
5	Supplying and drawing following pair, 0.6 sq.mm FR PVC insulated copper conductor, unarmoured telephone cable in the existing surface / recessed steel / PVC conduit as required.				
5.1	2 Pair	Metre	9450		
6	Supply and drawing of following sizes of 0.6 mm dia annealed tinned copper conductor PVC insulated and PVC sheathed unarmoured telephone cable in surface/ recess steel conduit complete as required.				
6.1	10 Pair	Metre	340		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6.2	20 Pair	Metre	190		
6.3	50 Pair	Metre	370		
6.4	100 Pair	Metre	680		
7	Supply Testing and Commissioning of MDF 800 Pair for Exchange and Field side with IPMs on all Circuits.	Nos.	2		
SUB TOTAL OF SUBHEAD - VI (TELEPHONE SYSTEM)					
SUBHEAD - VII (COMPUTER AND TV SYSTEM)					
1	Supply and fixing of following sizes of ISI marked steel conduit alongwith the accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
1.1	20 mm dia	Metre	850		
1.2	25 mm dia	Metre	2500		
2	Supplying and fixing 2 module modular metal box on surface or in recess including providing and fixing 1 No., Co axial TV Outlet, connections, etc. complete as required.	Each	65		
3	Supply, laying, testing and commissioning of the following co-axial PVC insulated conductor cable in existing surface / recessed conduit etc. and including making terminal joints, complete as required.				
3.1	RG-11	Metre	560		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.2	RG-6	Metre	1280		
4	Supplying, erection, testing and commissioning of following tap off / splitter as per specificatin in 1.6mm thick CRCA sheet steel enclosure for CATV system.				
4.1	4 Way splitter box	Each	1		
5	Supply, Installation, Testing and Commissioning of CATV Amplifier	Each	7		
6	Supply and drawing CAT-6, 650 Mh, LAN Cable in existing recessed conduit complete as required.	Metre	25000		
7	Supply, fixing and termination of Cat-6 I/O, as per specifications. (For the Field side)	Nos.	1000		
8	Supply, fixing and termination of Cat-6 24 port Jack panel, as per specifications. (For the switch side)	Nos.	50		
9	Supply and fixing of Face plate, as per specifications. (For the Field side)	Nos.	500		
10	Supply of 5 Feet long Patch cord, Cat-6 factory crimped (For jack panel to switch connection)	Nos.	1000		
11	Supply of 7 Feet long Patch cord, Cat-6, factory crimped (For jack panel to switch connection)	Nos.	1000		
12	Supply and fixing of Tag Tie for Patch cord numbering (ISI Marked)	Nos.	20000		

PART-2 PRICE BID FOR ELECTRICAL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
13	Supply and fixing of Cable Tie (ISI Marked)	Nos.	20000		
14	Supply and fixing of Hardware for mounting switch & Jack panel in the rack (ISI Marked)	Nos.	1000		
15	Supply and fixing of PVC Gang box (ISI Marked)	Nos.	1000		
16	Supply and Installation of Open Aluminim Rack 45 U with vertical cable manager 100x100 mm double sided, 2 nos. of power strip having min. 6/16 Amp 5 socket on each rack	Nos.	10		
17	Supply and fixing of PVC Cable Manager 1U with PVC cover (For connection in jack panel & switch) (ISI Marked)	Nos.	50		
18	Supply, laying and termination of Optical Fibre Cable, 6 core, OM-3, 10GIG, armored, MMF existing PVC conduit. (To interconnect floor switch racks to main switch room)	Mtrs.	500		
19	Supply and fixing of SC 1.5m pigtail, 10Gig MMF	Nos.	48		
20	Supply, Installation, testing and Commissioning of LIU rack mountable with loaded 24 port SC adapter (MMF)	Nos.	1		
21	Supply, Installation, testing and Commissioning of LIU rack mountable with loaded 6 port SC adapter (MMF)	Nos.	4		
22	Supply of SC - LC duplex patch cord, 3 mtrs, OM-3, 10 Gig MMF	Nos.	10		
SUB TOTAL OF SUBHEAD - VII (COMPUTER AND TV SYSTEM)					

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - VIII (LT CABLES & SANDWITCH TYPE RISING)					
1	Supply of following size of 1.1KV grade multicore aluminium conductor XLPE insulated and PVC sheathed armoured cable as per IS : 7098:1988 with upto date amendments.				
1.1	2 Core 10 Sqmm.	Mtrs.	590		
1.2	4 Core 6 Sqmm.	Mtrs.	290		
1.3	4 Core 10 Sqmm.	Mtrs.	310		
1.4	4 Core 16 Sqmm.	Mtrs.	740		
1.5	4 Core 25 Sqmm.	Mtrs.	290		
1.6	4 Core 35 Sqmm.	Mtrs.	410		
1.7	3½ Core x 50 sq mm	Mtrs.	240		
1.8	3½ Core x 70 sq mm	Mtrs.	660		
1.9	3½ Core x 95 sq mm	Mtrs.	10		
1.10	3½ Core x 185 sq mm	Mtrs.	255		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.11	3½ Core x 300 sq mm	Mtrs.	2180		
1.12	4 Core x 185 sq mm Copper Cable	Mtrs.	120		
1.13	3½ Core x 240 sq mm	Mtrs.	10		
1.14	3½ Core x 150 sq mm	Mtrs.	10		
1.15	3½ Core x 120 sq mm	Mtrs.	10		
2	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
2.1	Upto 35 sq. mm	Mtrs.	2630		
2.2	Above 35 sq. mm and upto 95 sq. mm	Mtrs.	910		
2.3	Above 95 sq. mm and upto 185 sq. mm	Mtrs.	395		
2.4	Above 185 sq. mm and upto 400 sq. mm	Mtrs.	2190		
3	Supplying and making end termination with brass compression glands of following sizes of 1.1 kV grade multicore aluminium conductor PVC insulated and PVC sheathed.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.1	2 Core 10 Sqmm.	Each	24		
3.2	4 Core 10 Sqmm.	Each	70		
3.3	4 Core 16 Sqmm.	Each	60		
3.4	4Core 25 Sqmm.	Each	18		
3.5	4 Core 35 Sqmm.	Each	18		
3.6	3½ Core x 50 sq mm	Each	6		
3.7	3½ Core x 70 sq mm	Each	6		
3.8	3½ Core x 95 sq mm	Each	2		
3.9	3½ Core x 185 sq mm	Each	10		
3.10	3½ Core x 300 sq mm	Each	60		
3.11	4 Core x 50 sq mm	Each	12		

PART-2 PRICE BID FOR ELECTRICAL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.12	3½ Core x 240 sq mm	Each	2		
3.13	3½ Core x 150 sq mm	Each	2		
3.14	3½ Core x 120 sq mm	Each	2		
RISING MAINS BUS TRUNKING SYSTEM FOR LIGHTING & POWER					
4	Supplying, Installation, Testing & Commissioning of Pre-fabricated Sandwiched type insulated Rising Main/bus trunking with GI housing of minimum 1.6 mm thick of following capacities, as per IS 8623 / 1993 Part I&II suitable for 415Volt 3 Phase 4 wire (with 50 % Neutral) 50Hz AC supply system of aluminium bus bars complete with flange end, elbow, expansion joints, fire barriers, copper flexible end connections at both ends Earthing with 2 runs of copper earth of size 50mm x 6mm strips etc. i/c necessary supports etc. as per specifications attached as required. (suitable for fault level as given).				
	Note: The bus trunking shall be measured along the length of enclosure. The Aluminium strips which will go inside panels & end termination boxes shall not be put into measurement of bus trunking quantity				
4.1	250A, 35KA Rising main / bus trunking system for Power (B+G+5)	R.M.	23		
4.2	200A, 35KA Rising main /bus trunking system for UPS (B+G+5)	R.M.	23		
4.3	160A, 25KA Rising main /bus trunking system for Power (B+G+2)	R.M.	12		
4.4	125A, 25KA Rising main /bus trunking system for Light (B+G+5)	R.M.	23		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
4.5	100A, 25KA Rising main /bus trunking system for Light (B+G+2)	R.M.	12		
4.6	100A, 25KA Rising main /bus trunking system for UPS (B+G+2)	R.M.	12		
5	TAP-OFF BOX (PLUG IN BOX)				
	Supply, installation, testing and commissioning of distribution FP tap off unit box of following capacity on the existing rising mains bus trunking system and complete with FP MCCB/MCB as switching device, interconnections, earthing etc. as required.				
5.1	Tap Off Box with 100A FP 25KA MCCB.	Nos.	6		
5.2	Tap Off Box with 63A FP 25KA MCCB.	Nos.	17		
5.3	Tap Off Box with 40A FP MCB.	Nos.	10		
6	END FEED UNIT (ADOPTER BOX)				
	Supply, installation, testing & commissioning of " <u>End Feed Unit</u> " consisting of M.S. Box for mounting Moulded Case Circuit Breaker, Cable box for termination of incoming cable to Rising Mains including interconnection at both ends of MCCB complete as per specification & as required.				
6.1	250A, 4P MCCB of 35 kA breaking capacity	Nos.	1		
6.2	200A, 4P MCCB of 35kA breaking capacity	Nos.	1		
6.3	160A, 4P MCCB of 25kA breaking capacity	Nos.	1		
6.4	125A, 4P MCCB of 25kA breaking capacity	Nos.	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6.5	100A, 4P MCCB of 25kA breaking capacity	Nos.	2		
7	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
7.1	150 mm. Width x 50mm. Depth x 1.6mm. Thickness.	Mtrs.	255		
7.2	300 mm width x 50 mm depth x 1.6 mm thickness.	Mtrs.	80		
7.3	450 mm width x 50 mm depth x 2.0 mm thickness.	Mtrs.	60		
7.4	600 mm width x 62.5 mm depth x 2.0 mm thickness.	Mtrs.	120		
7.5	1200 mm width x 62.5 mm depth x 2.0 mm thickness.	Mtrs.	65		
8	Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
8.1	3½ Core x 50 sq mm	Each	1		
8.2	3½ Core x 300 sq mm	Each	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - VIII (LT CABLES & SANDWITCH TYPE RISING)					
SUBHEAD - IX (EARTHING)					
1	Supply of advance Maintenance Free Chemical Gel Earthing of Single Pipe Technology (Copper) - with 3 mtr long 63 mm dia pipe, filled with highly conducting metallic compounds with the permanent sealings at the both the ends with the lead terminal 32x10mm at the top along with 50 Kgs chemical compound (Moisture Booster) to retain the moisture, duly tested & certified by CPRI Laboratory. (For Neutrals) HT Panel Body -4No. , DG- 6 Nos., CSS-6Nos.,UPS- 6No.	Set	22		
2	Maintenance Free Chemical Gel Earthing of Dual Pipe Technology (GI) - with 3 mtr long 80 mm dia Outer pipe (MS), galvanization of 100 microns and 50 mm dia Inner pipe (MS), galvanization of 300 microns, and space between the two pipes filled with special conducting compound, permanently sealed at both ends with lead terminal of 32 x 10mm at the top along with 50 Kgs of chemical compound (Moisture Booster) to retain the moisture, duly tested & certified by CPRI Laboratory. For DG -4Nos., CSS-4Nos., LT Panel- 4 Nos., MV Panel Body-2Nos., HVAC Panels- 4Nos.	Set	18		
3	Providing and fixing 50 mm X 6 mm size of G.I. strip in 80 mm dia 'B' class G.I. pipe from earth electrode as required	Mtr.	70		
4	Providing and fixing 50 mm X 6 mm G.I. strip on surface or in recess for connections etc, as required	Mtr.	225		
5	Providing and fixing 50 mm X 6 mm size of copper strip in 80 mm dia 'B' class G.I. pipe from earth electrode as required	Mtr.	30		
6	Providing and fixing 50mm X 6 mm copper strip on surface or in recess for connections etc, as required	Mtr.	250		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
7	Providing and fixing 25 mm X 5 mm size of copper strip with PVC insulated sleeves in 40 mm dia G.I. pipe from earth electrode as required	Mtr.	200		
8	Providing and fixing 25 mm X 5 mm copper strip with PVC insulated sleeves on surface or in recess for connections etc, as required	Mtr.	100		
9	Providing and fixing 25 mm x 5 mm G.I. strip on surface or in recess for connections etc. as required.	Mtrs.	170		
10	Providing and fixing 6 SWG dia. G.I. wire on surface or in recess for loop earthing as required.	Mtrs.	425		
11	Providing and fixing 6 SWG dia GI wire on surface or in recess for loop earthing along with the existing surface / recessed conduits / submain wiring / cable as required.	Mtr.	1200		
SUB TOTAL OF SUBHEAD - IX (EARTHING)					
SUBHEAD - X (LIGHTNING PROTECTION SYSTEM)					
1	Supply & installation of Advance Lightning Protection System including all necessary fixing accessories & effective connections complying the detailed technical specifications given therein.				

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.1	Supply & installation of Early Streamer Emission type Lightning Protection complete with the Lightning Air Terminal - Configured as a Spheroid which is comprised of separate electrically isolated 4 panels surrounding an Earthed Central Finial. The Insulation material used to electrically isolate the panels shall be comprised of a base polymer which provides high Ozone & UV resistance with a di-electric strength of 24-38 KV/mm tested as per NFC 17-102 & IEC 60-1:1989.The ESE Terminal shall be tested and certified by CPRI, Govt. of India for the impulse current of 45KA(8/20micro sec) with 5 positive and 5 negative impulses.The ESE terminal will offer a protection radius of 79 Mtrs. with level High Protection to be installed at the roof top (centre) of the building. Model: LPI - Stormaster for Standard Protection	Nos.	1		
1.2	Supply, Installation & Commissioning of Mast (G.I. of suitable height) for mounting the terminal & adaptor to mount the Air Terminal with Coupler, wires, etc	Nos.	1		
1.3	Supply, Installation & Commissioning of Maintenance Free G.I Earthing - Dual Pipe (G.I.) with Flat Technology of 3 mtr long 80 mm dia with the inner Flat thickness of 38x10mm with adequate galvanization of 100 microns (Outer pipe) & 300 microns (Inner pipe) filled with special conducting compound, 50 Kgs of Moisture Booster to retain the moisture duly tested & certified by CPRI Laboratory	Nos.	2		
1.4	Supply, Installation & Commissioning of Lightning Strike Recorder (6 digits display) of not resettable type in an IP 67 enclosure with the minimum sensitivity of 1500A & maximum capacity of 220 KA (8/20 micro second waveform) tested as per IEC 60-1:1989	Nos.	1		
1.5	Supply, Installation & Commissioning of Down conductor of 70 sq.mm single core insulated flexible Copper cable with necessary accessories, etc	Mtr.	240		
1.6	Supply, Installation & Commissioning of test link in weather proof 1.6 mm thick MS box of approved make & design	Nos.	1		
SUB TOTAL OF SUBHEAD - X (LIGHTNING PROTECTION SYSTEM)					

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - XI (SOLAR LIGHTING AND ACCESSORIES)					
1	Supply and erection of solar power LED street light in an integrated design for outdoor application with luminous efficiency of 100Lumens/Watt with maintenance free lead acid battery integrated design with various components such as battery, solar PV module, charge controller and luminaires on 14 watt LED alongwith poles, arms, support structure, cable tray, battery cable etc all forming part of one system.	Each	4		
2	External Lighting Feeder Pillars:				
	Supply and fixing of floor mounting, totally enclosed, compartmentalized, cubical, dust, vermin proof and outdoor type ROAD LIGHTING PILLAR fabricated out of 2mm thick cold rolled carbon anealed, sheet steel, intermnally strengthened with angle iron frame work with following incoming and outgoing feeders (fabricatedout of 2mm CRCA sheet steel) including supplying and mounting including making connectins / interconnections with lugs / glands crimping tools, testing and commissioning of following items inside the panel:-				
	Incoming				
a)	63A TPN MCB - 1 No.				
b)	63A, 4P Contactor - 1 No.				
c)	Time Switch with daily dial suitable for operation on 230V single phase 50Hz AC supply - 1 No.				
	Auto Manual Selector Switch - 1 No.				
a)	Bus Bars				
	TPN bus bar of 100A rating				
	Outgoings				
a)	20A TP MCB - 6 Nos.				
b)	20A DP MCB - 6 Nos.				
c)	Indication lamps (LED Type) - 3 Nos.				
	External Lighting Feeder Pillars Described as above.	Sets	2		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Providing and laying RCC pipes non pressure NP2 class with collar, jointed with stiff mixture of cement mortar 1:2 (1cement:2 fine sand) of sizes as given below, minimum 750 mm deep, under the roads for passing electric cables including necessary excavating, returning filling and disposal of surplus soil within the Plot as directed by Architect/Consultants/BHEL, complete all as specified.				
3.1	150 mm dia.	Meter	100		
3.2	250 mm dia.	Meter	50		
4	Supplying of following size XLPE insulated,PVC sheathed armoured, aluminium conductor cable of 1.1 KV grade				
4.1	4c x 10 sq.mm	Meter	330		
4.2	4c x 6 sq.mm	Meter	540		
5	Laying of one number PVC insulated and PVC sheathed/XLPE power cable of 1.1 kV Grade of size not exceeding 35 sq.mm direct in ground including excavation, sandcushioning, protective covering and refilling the trench as required.	Meter	2630		
6	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1kV grade as required.				
6.1	4c x 6 sq.mm	Each	72		
6.2	4c x 10 sq.mm	Each	30		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
7	Supplying and erection of gate light fixture fabricated out of M.S. Pipe 4mm thick 40mm nominal dia 0.5m long in cement concrete foundations 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) complete with 1 No. Philips Cat No. SPC 101/70W (E) Sodium vapour lamp complete with all accessories in outdoor type control gear box necessary civil work marshelling box having two nos. three way brass connectors, one no. 6amps. SP MCB, cable glands, earthing stud, necessary interconnections and 40mm dia G I Pipe 'B' Class for protection of the upright cable and painting etc., as reqd.	Each	2		
8	Supply and erection of Parking light poles fabricated out of M.S. pipe, 4 mm thick, 80 mm nominal dia. 3.5 m long complete with pole cap MS base plate of 300 x 300 x 6mm., mild steel marshelling box, having 2 nos. 3 way brass connectors, 1 no. 6 amps. SP MCB, cable glands, earthing stud, junction box of size 250 x 200 x 75 mm. with 2 Nos. 32 mm dia GI class B pipes and wiring with 2 x 2.5 Sq.mm. copper conductor wire complete, including painting of pole with two coats of approved aluminium paint over one coat of steel primer, excavation, concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) for foundation, all as specified.	Each	8		
9	Supply and erection of 80 mm dia. 6 meter long 'C' class MS Pole for Street Light fitting, with 300mm x 300mm x 6 mm thick MS base plate for Fixing on PCC foundation, complet with casting of RCC (1:2:4) foundation 1.0 meter deep and 500 mm above ground of 450mm x 450mm size with 4 nos. M12 G.I.Nut & Bolt grouted in foundation, excavation, refilling and removal of surplus soil as required for foundation, including providing of 750mm long 40mm dia. G.I. Pipe welded @10 degree from horizontal to a suitable size of Top cover Bracket to be fitted on the top of the pole, nipple for fixing Light fitting, providing and grouting/fixing of suitable size of J.box with 10/16A SP MCB and 4way connector, 40 mm dia. 'B' class G.I. pipe of suitable length for cable entry, 3x1.5 sq.mm. Cu. wire from JB to Light fittings as required, complete with painting with 1 coat of primer and 2 coat of white enamel paint or approved colour.	Each	19		
10	Supplying installation testing and commissioning of following luminaires complete with necessary starter/s & copper wound choke, capacitors, bends, Tees, couplers, current collector units, lamps etc. as required.				
10.1	Supply, Installation, Testing & Commissioning of Post top Lantern Philips Cat No. SPC 101/70W (E) Sodium vapour lamp.	Each	10		

PART-2 PRICE BID FOR ELECTRICAL WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10.2	Supply, Installation, Testing & Commissioning of BOLLARD Lights (Philips Cat No. FGC100 1x PLS 9W with 9 watt PL Lamp)	Each	36		
10.3	Supply and fixing of Road light fixture on the existing poles (Philips Cat No. BRP320 24LED-HP/CW PSU GR Greenline 45 W LED with 45 W LED Lamp)	Each	19		
SUB TOTAL OF SUBHEAD - XI (SOLAR LIGHTING AND ACCESSORIES)					
SUBHEAD - XII (FIRE SUPPRESSION SYSTEM)					
1	Supply, Assembly, Erection, Testing & Commissioning of Aerosol based fire suppression electrical device complete as required.				
1.1	500 gms (Electrical)	Nos.	1		
1.2	1500 gms (Electrical)	Nos.	10		
1.3	2500 gms (Electrical)	Nos.	15		
SUB TOTAL OF SUBHEAD - XII (FIRE SUPPRESSION SYSTEM)					
SUBHEAD - XIII (DISMANTLING OF ELECTRICAL EQUIPMENTS)					
1	Dismantling, shifting & stacking of all the Electrical Equipments (e.g. light fitting, Fan, Conduiting, Distribution Board etc.) from each floor including basement for each building as per the instructions of Architect/Consultants/BHEL complete in all respect.	Job	1		
2	Dismantling, shifting & stacking of all the Electrical Equipments (e.g. Transformer - 2 Nos, , LT Panel , HT Panel including Cabling) as per the instructions of Architect/Consultants/BHEL complete in all respect.	Job	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-V Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
4	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-IV Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
5	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-III Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
6	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-II Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
7	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-I Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
8	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-Ground Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
9	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for rear block-Basement Complete (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		

PART-2 PRICE BID FOR ELECTRICAL WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for front block-II Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
11	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for front block-I Floor Complete (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
12	Buy-back cost for serviceable materials - light fittings, Fans, Conduiting, Distribution Board, Transformer - 2 Nos, LT Panel, HT Panel including the Cabling, Wiring, power sockets, etc.for front block-Ground Floor (Negative values shall be quoted in the rate and amount column and shall be accounted in the total cost)	Lot	1		
SUB TOTAL OF SUBHEAD - XIII (DISMANTLING OF ELECTRICAL EQUIPMENTS)					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-3 PRICE BID FOR PLUMBING WORK

SUMMARY

Sl. No.	<u>SUMMARY OF PLUMBING WORK</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	SUB HEAD - I - SANITARY FIXTURES	
2	SUB HEAD - II - SOIL, WASTE AND VENT PIPES, RAIN WATER PIPES	
3	SUB HEAD - III - WATER SUPPLY	
4	SUB HEAD - IV- EXTERNAL SEWERAGE & DRAINAGE	
5	SUB HEAD - V- PUMPS & EQUIPMENT, SOLAR PANEL AND MECHANICAL EQUIPMENTS.	
TOTAL COST OF PART-3 PLUMBING WORK		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
A.	INTERNAL PLUMBING WORK				
SUB HEAD - I - SANITARY FIXTURES					
1	Providing, fixing, testing and commissioning of White colour vitreous China wall mounting type European water closet with C.P. bolts, nuts, C.I. chair or other hanging arrangements, bakelite seat & cover with C.P. hinges & rubber buffers, C.P. brass screw, washer with all accessories including cutting & making good the walls & floors slab wherever required.Price include fixing of pneumatic type cistern comprising of square /round actuator button facia assembly including brass / SS screws and washer complete, cutting and making good the walls floors wherever required.				
	Description Model Make				
1.1	WC 20040/CNS-WHT-WS01 Hindware/Jaguar	Each	34		
1.2	WC K - 16817 IN - 00/FLS-WHT-0111 Kohler escale/Jaguar	Each	5		
3	Providing and Fixing, testing & commissioning of CP brass ABS Health Faucet complete with hook and flexible SS tube min. Length 1.0 m as required.				
	Description Model Make				
3.1	Health Faucet Allied- 573 Jaquar	Each	34		
3.2	Health Faucet K -12927-IN-CP/Allied- 573 Kohler/Jaguar	Each	5		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
4	Providing, fixing, testing and commissioning of vitreous china oval wash basin / circular basin complete including CI / MS brackets duly painted, cutting and making good the walls floors wherever required				
	Counter top oval shape wash basin size- 560x450mm.				
	Description Model Make				
4.1	WB 10069/ARS-WHT-0604 Hindware/Jaguar	Each	43		
4.2	WB K -114719K-1-0/JDS-WHT-0542 Kohler/Jaguar	Each	5		
5	Providing & fixing of sensor based automatic hot no touch & cold water tap with solenoid valves at inlet, Doppler based sensor, control box, battery backup supply. (SNR-51051 Jaquar)	Each	39		
6	Providing, fixing, testing and commissioning of CP brass waste assembly, 32 mm dia.CP bottle trap with extension piece, wall flanges, union and rubber adapters for wash basin waste connection complete including cutting and making good the walls and floors wherever required.				
	Descriptio Model Make				
6.1	Bottle Trap Allied- 769-B Jaquar	Each	48		
7	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:				
7.1	Kitchen sink with drain board				
7.1.1	Kitchen sink 510x1040 bowl depth 200 mm	Each	20		

PART-3 PRICE BID FOR PLUMBING WORK							
S.NO. (1)	DESCRIPTION OF ITEMS (2)			UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
8	Providing, fixing, testing and commissioning of CP brass waste assembly,32 mm dia. CP bottle trap with extension piece, wall flanges, union and rubber adapters for kitchen sink waste connection complete including cutting and making good the walls and floors wherever required.						
	Description	Model	Make				
8.1	Bottle Trap	Allied- 777	Jaquar	Each	20		
9	Providing, fixing, testing and commissioning of white vitreous china large flat back urinal supported by CI / MS bracket duly painted, including CP brass waste with dome type grating, CP cast brass bottle trap with extension piece, wall flanges, with built in automatic sensor based flushing system complete with all accessories.						
	Description	Model	Make				
9.1	Urinal	60010/URS-WHT-0702	Hindware/Jaguar	Each	16		
9.2	Urinal FV	URS-WHT-0703	Jaquar	Each	31		
9.3	Kohler/Jaguar	K - 18842-D-O/URS-WHT-0704	Kohler/Jaguar	Each	5		
10	Providing and fixing white vitreous china standard Urinal partition of size 680x300 mm fixed with expandable anchor fasteners with C.P. brass bolts and washers, embedded in wall with anchor and set in cement concrete complete including cutting and making good the walls where ever required.						
	Description	Model	Make				
10.1	Urinal Partition	61001	Hindware	Each	9		
11	Providing and fixing 600 x 450mm beveled edge mirror of superior glass (of approved quality preferably modi float) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete including making holes in mirror			Each	48		

PART-3 PRICE BID FOR PLUMBING WORK							
S.NO. (1)	DESCRIPTION OF ITEMS (2)			UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
12	Providing and fixing CP brass toilet paper holder in wall with necessary CP brass screws						
	Description	Model	Make				
12.1	Paper Holder	Continental - 1153.	Jaquar	Each	34		
12.2	Paper Holder	K-14444-CP	Kohler	Each	5		
13	Providing and fixing wall mounted 15mm C.P brass Sink Single Lever Mixer for kitchen sink with swinging spout complete, including cutting and making good the walls wherever required.						
	Description	Model	Make				
13.1	Sink mixer	FLRS-5173B	Jaquar	Each	19		
14	Providing, fixing, testing and commissioning of 15 mm dia two way C.P. brass bib cock with Hose union & C.P. wall flange washer, nut bolt of approved quality & making wall good.						
	Description	Model	Make				
14.1	Two way bib cock	FLRS5041	Jaquar	Each	39		
15	Providing & fixing of C.P. brass Towel ring in wall with necessary CP brass screws						
	Description	Model	Make				
15.1	Towel ring.	Continental - 1121N	Jaquar	Each	48		
16	Providing and fixing CP brass towel rail size of 600x20 mm of approved make complete with CP brackets fixed to wooden cleats with CP brass screws						
16.1	C.P. brass towel rail with two C.P. brass brackets 600 x 20 mm size. (1111N Jaquar)			Each	15		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
17	Providing, fixing, testing and commissioning of C.P. brass angular concealed stop cock with C.P. wall flange, sliding cap Nut and Washer etc. complete as required.				
	Description Model Make				
17.1	Angular stop cock 5053 Jaquar	Each	200		
18	Providing and fixing CP brass twin coat hooks fixed on toilet door/wall with CP brass screws.				
	Description Model Make				
18.1	Twin coat hook Continental - 1161N Jaquar	Each	39		
19	Providing, fixing, testing and commissioning of C.P Copper connection 450 mm long including nuts and washers and making connection to fixtures and fittings complete as required.				
	Description Model Make				
19.1	Copper connection Allied- 803 Jaquar	Each	96		
20	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour weighing not less than 105 gms.				
	Description Model Make				
	Soap Container 1137 N Jaquar	Each	48		
21	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
	Description Model Make				
	Bib Cock Continental - 037 Jaquar				
21.1	15 mm nominal bore	Each	20		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
22	Providing & Fixing C.P brass cast brass air purifier fixed to wall /door with wooden cleats and C.P brass screws including cutting and making good the walls wherever required	Each	49		
23	Providing and fixing of solid state, no touch operating, fully hygienic hand drier of approved shade with single blower, with time delay, summer & winter control, music while drying, volume. ON/OFF control including providing necessary brackets, cable from other to plug. Plug too key and lock etc. completed as required.	Each	39		
24	P/F CP pillar cock auto closing system with aerator for foam flow effect with water discharge in (6- 9 seconds of Jaquar make code no. PRS 031	Each	12		
SUB TOTAL OF SUB HEAD - I - SANITARY FIXTURES					
SUB HEAD - II - SOIL, WASTE AND VENT PIPES, RAIN WATER PIPES					
INTERNAL DRAINAGE (SOIL, WASTE & VENT)					
1	Providing, fixing and jointing UV stabilized SWR (Type - B) pipes conforming to IS:13592 including all fittings such as bends, clamps, tees, cowls, clean out plugs, offsets, Y-tees, tees, door fittings, clips, clamps, stays etc. conforming to IS-14735, including jointing with rubber gasket fixing in sunk areas, Fixing at wall / ceiling level supported by steel clamps,m.s stays,m.s holder-bat clamps & hangers etc. including Cutting, chases/ holes in floors / walls / slab and making good the same after pipe have been duly laid and testing complete in all respects.				
1.1	110 OD	Metre	1097		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
2	Providing and fixing in position uPVC SWR floor trap including providing necessary steel support and as per Specification. Making proper connection cutting chase / hole in floors / slabs and bringing the same in proper condition and shape after placing the trap in right position complete as required. The hopper and trap shall be set in cement concrete mix 1:2:4 complete as required.				
	110 mm inlet and 110 mm outlet	Each	116		
3	Providing and fixing on wall face/Concealed unplasticised rigid PVC rain water pipes conforming to IS:13592 Type A including jointing with seal ring confirming to IS:5382 leaving 10 mm gap for thermal expansion. (i) Single socketed pipes. Including MS clamp fixed at a certain distance in cement mortar and making wall good				
3.1	110 mm diameter (6 kg/sq. cm)	Metre	20		
3.2	160 mm diameter (6 kg/sq. cm)	Metre	380		
4	Providing and fixing on wall face/Concealed unplasticised - PVC moulded fittings/accessories for unplasticised rigid PVC rain water pipes conforming to IS:13592 Type A including jointing with seal ring confirming to IS:5382 leaving 10 mm gap for thermal expansion. Including MS clamp fixed in cement mortar and making wall good.(Rain water pipe fittings).				
4.1	Single tee without door				
4.1.1	110x110x110mm	Each	4		
4.2	160x160x160 mm	Each	20		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
4.3	Bend 87.5 degree				
4.3.1	110 mm bend	Each	4		
4.4	160 mm bend	Each	20		
4.5	Shoe (Plain)				
4.5.1	110 mm shoe	Each	4		
4.6	160 mm shoe	Each	20		
5	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	Each	24		
6	Providing and laying cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded stone aggregate 20 mm nominal size) 80 mm thick all-round the SCI/centrifugally S&S pipe diameter.				
6.1	100 mm dia	Metre	427		
7	Providing, fixing and jointing UV stabilised uPVC waste water Single socketed pipes conforming to IS:4985 (working pressure 6 kg/sqcm.) including all fittings such as bends, clamps, tees, cowls, clean out plugs etc including Fixing at wall / ceiling level supported by steel clamps & hangers etc. including Cuting, chases/holes in floors / walls / slab and making good the same after pipe have been duly laid and testing complete in all respects.				
7.1	50 mm OD nominal bore (Sink, Urinal to floor trap)	Metre	180		
7.2	63 mm OD nominal bore (Floor Drain to Floor Trap)	Metre	133		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
8	Providing and fixing PVC cleaning eye on horizontal soil & waste pipes.				
8.1	110 mm dia	Each	28		
9	Providing and fixing PVC inlet hopper with two or three inlets fittings to receive waste pipes from fixtures waste.	Each	116		
10	Making 'Khurras' size 450 X 450 mm with average minimum thickness of 50mm cement concrete 1:2:4 (1 cement : 2 Coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x 1m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	Each	24		
11	Providing and fixing Heavy Class SS grating with Cockroach proof SS strainer of approved design including setting in floor with cement mortar to match with floor finish as per architect requirement suitable for waster and FT.	Each	116		
12	Providing and fixing thick CP brass hinged grating with rim of approved design including setting floor with cement mortar (as per approved by BHEL).				
12.1	150 mm dia	Each	18		
13	Providing & fixing 75mm x 50mm uPVC (Floor drain) waste with reducing elbow & nipple cutting chases, the floor / slab, repairs complete as required and connection to uPVC waste pipe.	Each	18		
SUB TOTAL OF SUB HEAD - II - SOIL, WASTE AND VENT PIPES, RAIN WATER PIPES					

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - III - WATER SUPPLY					
1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.				
Concealed work including cutting chases and making good the walls etc.					
1.1	15 mm nominal outer dia pipes (SDR-11)38820	Metre	887		
1.2	20 mm nominal outer dia pipes (SDR-11)21936	Metre	320		
1.3	25 mm nominal outer dia pipes (SDR-11)35616	Metre	139		
1.4	32 mm nominal outer dia pipes (SDR-11)6048	Metre	50		
1.5	40 mm nominal outer dia pipes (SDR-11)	Metre	10		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
2	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.				
2.1	15 mm dia nominal bore	Metre	466		
2.2	20 mm dia nominal bore	Metre	257		
2.3	25 mm dia nominal bore	Metre	173		
2.4	32 mm dia nominal bore	Metre	56		
2.5	40 mm dia nominal bore	Metre	67		
2.6	50 mm dia nominal bore	Metre	85		
2.7	65 mm dia nominal bore	Metre	140		
2.8	80 mm dia nominal bore	Metre	240		
2.9	100 mm dia nominal bore	Metre	175		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement ,trenching ,refilling & testing of joints complete as per direction of Engineer in Charge.				
	External work				
3.1	50 mm dia nominal bore	Metre	170		
3.2	65 mm dia nominal bore	Metre	75		
3.3	80 mm dia nominal bore	Metre	150		
3.4	100 mm dia nominal bore		55		
4	Providing, fixing, joints and testing in position the following UPVC Pipe conforming to IS:4985 of 6kg /sqcm for garden irrigation system cut to required length pipe to be laid below level in trenches up to required depth, including excavation in all kind of soil (hard rock) dewatering, refilling, watering, ramming and removing the surplus excavated material and putting 100 mm sand around and making good the same.				
4.1	25 mm OD	Metre	45		
4.2	63 mm OD	Metre	350		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	Stainless Steel Pipe for RO WaterSupply				
5	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.				
5.1	15 mm dia	Metre	243		
5.2	20 mm dia	Metre	95		
5.3	25 mm dia	Metre	35		
5.4	32 mm dia	Metre	45		
5.5	40 mm dia	Metre	35		
5.6	50 mm dia	Metre	130		
6	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)				
6.1	25 mm nominal bore	Each	20		
6.2	32 mm nominal bore	Each	7		
6.3	40 mm nominal bore	Each	4		
6.4	50 mm nominal bore	Each	5		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
7	Providing and fixing unplasticised PVC connection pipe with brass unions:				
7.1	45 cm length				
7.1.1	15 mm nominal bore	Each	49		
8	Providing & fixing full way lever operated forged brass ball valve of brass body with forged brass hard chrome plated steel ball tested to a pressure not less than 10 Kg / sqcm with threaded / flanged joints complete with nuts, bolts, gaskets, washers etc.				
8.1	15 mm dia.	Each	92		
8.2	20 mm dia.	Each	57		
9	Providing and fixing Nitrile Rubber Insulation 9 mm thick on hot water supply/return pipes without outer mechanical protection				
9.1	15 mm dia.	Metre	417		
9.2	20 mm dia.	Metre	106		
9.3	25 mm dia.	Metre	49		
9.4	32 mm dia.	Metre	5		
9.5	40 mm dia.	Metre	5		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10	Providing and fixing nitrile rubber insulation on hot water supply / return pipes complete with fire proof outer mechanical protection on nitrile rubber insulation.				
10.1	15 mm dia. (9 mm thickness)	Metre	320		
10.2	20 mm dia. (9 mm thickness)	Metre	130		
10.3	25 mm dia. (9 mm thickness)	Metre	85		
10.4	32 mm dia. (13 mm thickness)	Metre	25		
10.5	40 mm dia. (13 mm thickness)	Metre	40		
10.6	50 mm dia. (13 mm thickness)	Metre	35		
10.7	65 mm dia. (19 mm thickness)	Metre	60		
10.8	80 mm dia. (19 mm thickness)	Metre	85		
10.9	100 mm dia. (19 mm thickness)	Metre	80		
11	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) (Class II)				
11.1	for 100 mm nominal bore	Each	6		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
12	Providing and fixing Butter fly valve with nitrile seat and stainless steel stem with lever operation and cast iron body in powder coated finish, suitable for test pressure of 10Kg/sq.mm) with flanges, gaskets and necessary pad locking arrangement complete required.				
12.1	65mm nominal outer dia pipes	Each	4		
12.2	80 mm nominal outer dia pipes	Each	6		
13	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc. if required will be paid separately)				
13.1	100 mm dia	Each	4		
14	Constructing masonry chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm, top diameter, 160mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design				
14.1	With F.P.S. bricks	Each	4		
15	Constructing masonry Chamber 30 x 30 x 55 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 fine sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chain lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 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.				
	With F.P.S. bricks	Each	8		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
16	Providing and filling sand of grading zone V or coarser grade around the G.I. pipes in external work.				
16.1	50 mm dia nominal bore	Metre	170		
16.2	65 mm dia nominal bore	Metre	75		
16.3	80 mm dia nominal bore	Metre	150		
16.4	100 mm dia nominal bore	Metre	55		
17	Providing & fixing in position 25 mm dia lawn hydrants consisting of 20 mm dia Ball valve, GI nipple and threaded hose receiver complete as required.	Each	8		
18	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50m				
18.1	Pipes, cables etc. exceeding 80mm dia. But not exceeding 300mm dia.	Metre	55		
19	Dismantling of all existing toilet fixtures WC, Wash Basin, Kitchen sink with all toilet fitting such as cp brass fitting such as pillar cock stop cock angle valve etc.GI pipes (15 mmdia to 100mm dia) and CI pipe (75mmdia to 150 mm dia pipe) including all necessary gate valve fittings and specials such as Bends,including cutting, chases/holes in floors / walls / slab including staking of dismantle material at site upto Stacking yard as directed by BHEL.	LOT	1		
SUB TOTAL OF SUB HEAD - III - WATER SUPPLY					

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - IV- EXTERNAL SEWERAGE & DRAINAGE					
1	Excavating trenches either by manual or mechanical means of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil (of all types), and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, upto stacking yard as directed by BHEL.				
1.1	Pipes, cables etc. exceeding 80mm dia. But not exceeding 300mm dia.	Metre	770		
2	Extra over for item no. 1.1 excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth up to 1.5 metre)	Metre	115		
3	Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the pro-portion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete.				
3.1	150 mm diameter	Metre	30		
3.2	200 mm diameter	Metre	290		
4	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.				
4.1	150 mm dia R.C.C pipe	Metre	100		
4.2	300 mm dia R.C.C pipe	Metre	350		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Providing and laying cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) around S.W./RCC pipes including bed concrete as per standard design:				
5.1	150 mm diameter	Metre	130		
5.2	200 mm diameter	Metre	290		
6	Providing and laying cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design:				
6.1	300 mm diameter	Metre	350		
7	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto stacking yard and lift upto 1.5m, disposed earth to be leveled and neatly dressed. (For Manholes)				
7.1	All kinds of soil	Cum	135		
	Providing and fixing square-mouth S.W. gully trap grade 'A' (excavation and refilling of soil of all type is included as per req.) complete with C.I. grating, brick masonry chamber including a coat of net cement inside with water tight C.I. cover with frame of 300x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:.				
	180 x 150mm size P type				
7.2	F.P.S. Bricks class designation 75	Each	15		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
8	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand), R.C.C. top slab with 1:2:4 mix (1cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)150mm thick, inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making necessary channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design. Excavation and refilling of soil of all type is included				
8.1	Inside size 90 x 80 cm and 45 cm deep including C.I. cover with frame (light duty) 455 x 610 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)				
8.1.1	With F.P.S. bricks with class designation 7.5	Each	20		
8.2	Inside size 120 x 90 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)				
8.2.1	With F.P.S. bricks with class designation 7.5	Each	24		
9	Extra depth for manholes				
9.1	Size 90 x 80 cm (With With F.P.S. bricks with class designation 7.5)	Metre	5		
9.2	Size 120x 90 Cm (With F.P.S. bricks with class designation 7.5)	Metre	8		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS: 10910 on 12 mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specification and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	42		
11	Constructing Brick masonry percolation pit 3m dia and 5m deep with bricks of class designation 7.5 in cement mortar 1:6, base concrete 1:4:8 150mm thick below the brick wall, including cost of necessary excavation in any type of soil, back filling as required in 20cm thick layers, dewatering if any, shuttering and shoring and disposal of surplus excavated material within 2 nos. 300mm dia borings to a depth of 50 metre (to be measured from the bottom of the percolation pit), provisioning and fixing 160mm O.D. PVC pipes, tested to 6kg/sqcm, in each bore and upto the height of 300mm above the RCC top slab. The PVC pipe shall be slotted except 3.0 metres at the top and 3.0 metres below from the bottom of the percolation pit, which shall be blind. Top of the PVC pipe shall be covered with PVC Socket & plug. Each bore around the PVC pipe shall be filled with pea gravels. The percolation pit shall be filled with river stone/pebbles as shown in drawing. The top slab shall be 150mm thick with RCC M20 including nominal reinforcement and 2 nos. of 560mm internal dia SFRC manhole covers				
	with frames conforming to IS:12592 (total weight of cover & frame shall not be less than 182 kg) shall be provided in the top slab. PVC encased 12mm dia steel bar Footrests shall be provided 300 centre to centre. The above shall be provided all as specified and 300mm dia RCC pipe for inlet and overflow as shown on drawings shall be measured separately.	Each	2		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
12	Material & labour for constructing Silt trap of size 1500mm x 3000mm x 2000mm deep in R.C.C. walls including necessary excavation and foundation concrete 150mm thick in 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 40mm nominal size), inside plaster 12mm thick in cement mortar 1:4 (1 cement : 4 coarse sand) finished with a floating coat of neat cement, C.C. floor, RCC slab in mix 1:2:4 & RCC baffle wall including reinforcement, centering & shuttering including 12mm dia steel bar footrests etc. and SFRC manhole cover and frame of 610mm x 455mm internal dimension conforming to IS: 12592 (total weight of cover & frame shall not be less than 70 kg)	Each	2		
13	Extra for each 1m boring or part thereof beyond 50m depth for all the two Bores including provisioning and fixing of PVC slotted pipes.	Metre	20		
14	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1 : 3 (1 cement : 2 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete:				
14.1	For pipes 250 to 300 mm diameter	Each	1		
15	Making connection of storm water drain with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1 : 3 (1 cement : 2 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete:				
15.1	For pipes 350 to 450 mm diameter	Each	1		
16	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to stacking yard as directed by BHEL and lift upto 1.5 m.	Cum	86		
17	Removal of surplus earth by mechanical transport upto 10 K.M.	Cum	78		
SUB TOTAL OF SUB HEAD - IV- EXTERNAL SEWERAGE & DRAINAGE					

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - V- PUMPS & EQUIPMENT, SOLAR PANEL AND MECHANICAL EQUIPMENTS.					
1	Providing and fixing of package type skid mounted hydropneumatic system comprising of:				
(a)	Horizontal / Vertical inline single/multistage centrifugal pumping set with stainless steel SS stage casing and SS impellers with stainless steel shaft, cast iron suction & discharge casing, connected to suitable capacity TEFC ventilated induction motor 2 pole, 2900rpm, suitable for 415+10% Volts, 3 phase, 50 Hz A.C. supply.				
(b)	Pressure vessel of non corrosive FRP composite construction lined with NSF and/or FDA listed material, like high density polyethylene with fully replaceable polyurethane. Air cell burst pressure of minimum of 5 times the vessel operating pressure and cycle tested for 2,50,000 cycles.				
	No. and capacity of Pressure Vessel - 01 Nos. x 100 Ltrs.				
(c)	Electrical Control Panel including provision for cyclic operation of pumps - Pump working sequence should change after every operation. Control panel with programmable logic controller (PLC) with inbuilt PID controller, digital display with fluorescent screen, 3 ph, 415±10%V, AC variable speed drives (Nos. of VFD's same as that of pumps including standby) of suitable capacity rating with inbuilt EN55011 class A RFI filters, having standard function of BI loop, energy saving catching a spinning load with speed search, auto hunting jog preset speeds, controlled stop on loss of supply power loss side through, DDC injection breaking fast stop. Drive should have selectable rated input frequency 50/60 Hz and output frequency range of 0.5-32 Hz, contactors, overload relays and MCBs should conform to IEC 898-1995 standards Ammeter, voltmeter. All trip indications should blink in case of trip and panels should only be accessible through an access code.				
(d)	Electronic Pressure switches having maximum pressure and differential scale should conforming BS-6134 standards and IP55 protection class.				
(e)	Complete set system to be mounted on a common MS base frame and shall follow following duty.				
(f)	The cost will include making necessary flanged suction and delivery headers in GI (C class)				
(g)	Motor to be of the same make as the pump				

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	(Vendor to submit performance curves and technical catalog of the proposed model for review & information)				
	The pump shall be selected for performance at best efficiency point. However, the pump selection shall be suitable for performance with set point @ + 20% of the rated head.				
1.1	Domestic: Capacity : 100 LPM Each Pump (1Working + 1 Standby) @ 40 M head.	Set	1		
1.2	Flushing: Capacity : 150 LPM Each Pump (1 Working + 1 Standby) @ 40 M head.	Set	1		
1.3	RO Water: Capacity : 50 LPM Each Pump (1 Working + 1 Standby) @ 40 M head.	Set	1		
2	Supply, assembly, erection, testing and commissioning of pumping system comprising the following:				
	Vertical/Horizontal centrifugal pumps (1 Working + 1 Stand-by) with mechanical seal, SS Volute casing and SS impeller connected to suitable capacity TEFC induction motor suitable for 415 ± 10 % volts, 3 phase, 50 cycles A.C. supply with 100 mm dia. pressure gauges including MS skid and mounting of the pumps on the skid. (Motor to be of the same make as the pump)				
2.1	Pump Capacity 100 lpm, at 30 m head (1 working + 1 standby)	Set	1		
	(Raw water pumps) for Domestic water treatment				
3	Supply, assembly, erection, testing and commissioning of pumping system comprising the following:				
	Vertical/Horizontal centrifugal pumps (1 Working + 1 Stand-by) with mechanical seal, SS Volute casing and SS impeller connected to suitable capacity TEFC induction motor suitable for 415 ± 10 % volts, 3 phase, 50 cycles A.C. supply with 100 mm dia. pressure gauges including MS skid and mounting of the pumps on the skid. (Motor to be of the same make as the pump)				
3.1	Pump Capacity 250 lpm, at 25 m head (1 Working + 1 Stand-by)	Set	1		
	(Pumps for boosting water supply from UG Flushing water tank for Garden Hydrant System)				

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
4	Hot Water Return Pump				
	Supply, assembly, erection, testing and commissioning of pumping system comprising the following:				
	Vertical/Horizontal centrifugal pumps (1 Working + 1 Stand-by) with mechanical seal, SS Volute casing and SS impeller connected to suitable capacity TEFC induction motor suitable for 415 ± 10 % volts, 3 phase, 50 cycles A.C. supply with 100 mm dia. pressure gauges including MS skid and mounting of the pumps on the skid. (Motor to be of the same make as the pump)				
	Pump Capacity 50 lpm, at 10 m head (1 working + 1 standby)	Set			
5	Hot Water Supply Pump				
	Supply, assembly, erection, testing and commissioning of pumping system comprising the following:				
	Vertical/Horizontal centrifugal pumps (1 Working + 1 Stand-by) with mechanical seal, SS Volute casing and SS impeller connected to suitable capacity TEFC induction motor suitable for 415 ± 10 % volts, 3 phase, 50 cycles A.C. supply with 100 mm dia. pressure gauges including MS skid and mounting of the pumps on the skid. (Motor to be of the same make as the pump)				
	Pump Capacity 60 lpm, at 10 m head (1 working + 1 standby)	Set			
6	Supplying, assembly, erection, testing and commissioning of RO Water treatment system and all its components of required size as per water test analysis to make the water suitable for drinking, complete including the following as mentioned below. The cost will include testing of permeate water sample from a CPCB approved test laboratory, generating and providing membrane analysis data form the licensed manufacturer's software etc.				
	Permeate water quantity = 3000 lit/hr.				
	Minimum Recovery = 70%				
	Raw Water Characteristics - As per Water Test Analysis Report of Shriram Test Laboratory to be got done by the supplier				
	Treated Water Quality				
	Turbidity : <1NTU				
	pH : 6.5-7.0				
	Total Hardness : < 10 ppm				
	Chlorides : < 10 ppm				
	Sulphates : < 5 ppm				
	TDS : < 50 ppm				

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
a	SS Vertical centrifugal Raw Water Pump (1 Working + 1 Stand-by)				
b	FRP Dual Media Filter				
c	Antiscalant Dosing System including pump chemical dosing pump, tanks etc.				
d	Polypropylene Micron/cartridge Filter and SS housing				
e	Stainless steel vertical multistage inline high pressure pump (1 Working) including dry running protection				
f	Spirally wounded RO Membranes				
g	Composite FRP RO pressure tube/vessel				
h	Automatic RO Module Cleaning System including chemical pump, cartridge filter, tanks etc.				
i	pH correction system incl. chemical dosing pump, tanks etc.				
j	Instrumentation including flow meters, digital TDS meter, digital pH meter, pressure gauges, low pressure switch, high pressure switch etc. complete.				
k	uPVC (8 kg/cm ²) piping and ABS valves for low pressure and SS-316, schedule 10 piping and SS-316 valves for high pressure piping in the plant.				
l	Electrical panel including all starters, overload relays, single phase preventers, voltmeters, ammeters, MCB's, indicating lights, push buttons, rocker switches, incomers, auto-manual switches etc. complete.				
m	All cabling , connections, terminations etc. required for the job.	Set	1		
7	Supply, assembly, erection, testing and commissioning of SS submersible non-clog sewerage pumps having the following capacities with vortex impeller / grinder type, complete with 3 phase squirrel cage submersible motor of required HP for 415 + 10% volts, 3 phase, 50 Hz. A.C. supply cooled by surrounding liquid, submersible cable upto main panel within the plant room, dry running preventor, G.I. guide pulling chain, all the necessary piping and accessories, valves, delivery header etc. as required complete in all respects. The rate will include electrical panel with cyclic operation as supplied by the manufacturers)				
	The above installation shall be complete with sump pump lifting assembly, ready made electro – galvanized MS lifting chain, GI pipe header complete with discharge manifold, flanges, tee, elbow etc. complete including GI pipe upto the top of sump and including GI union. Header shall be sized for both pump working under delivery velocity of 1.5 m/sec.				
7.1	Capacity of 250 lpm against a total head of 8m (solid handling 40 mm) (for sewerage disposal) (1 Working + 1 Stand by) (SS Body and SS Impeller and shaft)	Set	1		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
8	Supply, assembly, erection, testing and commissioning of SS submersible non-clog pumps, suitable to handle basement drainage having the following capacities with vortex impeller / grinder type, complete with 3 phase squirrel cage submersible motor of required HP for 415 + 10% volts, 3 phase, 50 Hz. A.C. supply cooled by surrounding liquid, submersible cable upto main panel within the plant room, dry running preventor, G.I. guide pulling chain, all the necessary piping and accessories, valves, delivery header and magnetic switch based automatic level controller etc. as required complete in all respects. The rate will include electrical panel with cyclic operation as supplied by the manufacturers)				
	The above installation shall be complete with sump pump lifting assembly, ready made electro – galvanized MS lifting chain, GI pipe header complete with discharge manifold, flanges, tee, elbow etc. complete including GI pipe upto the top of sump and including GI union. Header shall be sized for both pump working under delivery velocity of 1.5 m/sec.				
8.1	Capacity of 250 lpm against a total head of 8m (solid handling 10-12 mm) (Pump Room Drainage) (1 Working + 1 Stand by)	Set	3		
9	Supplying of Sodium Hypochloride dosing system consisting of one HDPE tank of 500 litres capacity with a positive displacement diaphragm dosing pump having variable flowrate of 0-15 lph. The motor shall be suitable for operation at 240 V / single phase /50 Hz. Supply. The pump shall be supplied complete with necessary polypropylene piping, valves, strainers, low level switch and injection fittings. The pump shall be speed & stroke control Asia LMI make.	Set	1		
10	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge/complete as per direction of Engineer in Charge.				
10.1	40 mm dia	Metre	25		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10.2	50 mm dia	RM	10		
10.3	65 mm dia	RM	15		
10.4	80 mm dia	RM	25		
10.5	100 mm dia	RM	25		
12	Supply, installation, testing and commissioning of tanker inlet connection complete with 80 mm dia GI inlet piping, hose inlet connection, MS cabinet enclosure (epoxy painted after fabrication), pad locking arrangement, inlet flexible hose complete with all necessary arrangement.	No.	1		
13	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) (Class II)				
13.1	80 mm dia	Nos.	4		
13.2	100 mm dia	Nos.	4		
14	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)				
14.1	50 mm nominal bore	Each	2		
14.2	65 mm nominal bore	Each	2		
15	Providing & fixing C.I. dual plate type check valve tested to a pressure of 15Kg/sqcm. Including rubber gasket, flanges, union, nuts, bolts, washers & painting complete as required.				

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
15.1	40 mm dia	Nos.	4		
15.2	65 mm dia	Nos.	2		
15.3	80 mm dia	Nos.	2		
15.4	100 mm dia	Nos.	2		
16	Providing & fixing C.I. 'Y' Strainer (screwed / flanged) with stainless steel fine wire mesh perforated sheet basket with necessary flanges / union nuts, bolts & washers complete as required (on pump suction).				
16.1	50 mm dia	Nos.	1		
16.2	65 mm dia	Nos.	1		
16.3	80 mm dia	Nos.	2		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
17	WATER SUPPLY PUMP PANEL				
	Supplying, Installation, Testing and Commissioning of dust and vermin proof wall/floor mounting type factory built sheet steel enclosed cubical panel, fabricated out of 2.0mm thick CRCA sheet, hinged doors of 2mm thick CRCA sheet, duly painted complete with Aluminium bus bars, inter-connection with solid copper conductor wires / aluminium strips, neutral links, earth bus etc. necessary metering protections & indications and mounted with the following as per specification complete as required.				
	Incoming :				
a)	100A, 4P MCCB '35ka' - 1 No.				
b)	TPN Alum bus bar 200 Amp. - 1 Set				
c)	(0-100A) Digital Ammeter cum Voltmeter with inbuilt selector switch & CT's ratio 100/5A 10va - 1 Set				
d)	3 Nos. Phase LED indications lamp with control MCB's -1 Set				
	Outgoing				
a)	40A, 4P MCB 'C' – 4 Nos.				
b)	25A, 4P MCB 'C' – 2 Nos.				
c)	25A, DP MCB 'C' – 4 Nos.				
d)	Fully automatic DOL starter suitable for 2/3 HP motor with incomer TP MCB 25A 'c' complete with single phase preventer, control wiring, Contactors, overload relay, auto/ manual/ off selector switch, Ammeter, Indications, ON/OFF Push buttons etc., as required. - 2 set				
e)	Fully automatic DOL starter suitable for 5 HP motor with incomer TP MCB 32A 'c' complete with single phase preventer, control wiring, Contactors, overload relay, auto/ manual/ off selector switch, Ammeter, Indications, ON/OFF Push buttons etc., as required. - 2 set				
f)	Fully automatic DOL starter suitable for 7.5 HP motor with incomer TP MCB 32A 'c' complete with single phase preventer, control wiring, Contactors, overload relay, auto/ manual/ off selector switch, Ammeter, Indications, ON/OFF Push buttons etc., as required. - 2 set				
g)	Fully automatic Star Delta starter suitable for 10 HP motor with incomer TP MCB 40A 'c' complete with single phase preventer, control wiring, Contactors, overload relay, auto/ manual/ off selector switch, Ammeter, Indications, ON/OFF Push buttons etc., as required. - 3 set				
	WATER SUPPLY PUMP PANEL as above	Set	1		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
18	PERFORATED M.S.CABLE TRAY				
	Fabricating and installing following size of perforated M.S. cable trays including horizontal and vertical bends, reducers, tees, cross members and other accessories as required and duly suspended from the ceiling with M.S. suspenders and including painting etc. as required.				
4.1.4	300mm width x 50mm depth x 1.6mm thickness	Mtrs.	10		
4.1.2	150mm width x 50mm depth x 1.6mm thickness	Mtrs.	20		
19	POWER CABLES (ALUMINIUM)				
	Supply, laying, fixing, testing, commissioning and end termination of following sizes of XLPE insulated PVC sheathed, armoured aluminium conductor cable of 1.1 KV grade on existing cable tray / surface as required.				
19.1	3½ core x 50 sqmm	Mtrs.	50		
19.2	3 core x 10 sqmm	Mtrs.	100		
19.3	3 core x 16 sqmm	Mtrs.	60		
20	GI EARTH STRIP				
	Providing and fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	Mtrs.	40		
21	GI EARTH WIRE				
	Providing and fixing 6 SWG G.I. Wire on surface or in recess for loop earthing along with the existing cable as required.	Mtrs.	150		

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
22	SOLAR HOT WATER SYSTEM				
	Providing and fixing Solar Hot Water indirect Heating System using approved type of heating liquid medium comprising of flat plate solar panels, including all interconnecting insulated G.I. piping, primary and secondary recirculation pumps, pressure type insulated hot water tank, sacrificial magnesium anode with steel core including valves on inlet, outlet, Y stainer and a water meter on the inlet, air release valve all mounted on galvanized MS sections complete with connection with the existing piping.				
a)	Flat plate solar collector panels of 2 x 1 m size approx. (nos. as specified below) the panels enclosed in insulated collector boxes with single piece toughned glass 4 mm thick and fixed with heat resistant gasket.				
b)	Integrated non pressurized hot water tank designed so as to have a Insulated M.S Horizontal tank (cap as specified below). Tank shall be provided with hot water inlet / outlet over flow/ drain connection with M H cover. Vent pipe connection & GI Vent pipe of adequate height / length, pressure gauge at inlet/ outlet.				
c)	Inter-connected insulated G.I. piping insulated with 9 mm thick nitrile rubber heat resitant insulation sections (Vidoflex make) and valves with outer mechanical protection of aluminium sheet cladding.				
22.1	30 Solar Collector Panel				
	3000 liter hot water tank with electric back up	Set			
SUB TOTAL OF SUB HEAD - V- PUMPS & EQUIPMENT, SOLAR PANEL AND MECHANICAL EQUIPMENTS.					
Water Closet					
Water Closet shall be wash down or siphonic wash down type floor or wall mounted set, as shown in the drawings, designed for low volume flushing from 5-7 litres of water, flushed by means of suitable cistern installed on wall along with all fittings fixtures. Flush pipe / bend shall be connected to the WC by means of a suitable rubber adaptor. Wall hung WC shall be supported by CI floor mounted chair which shall be fixed in a manner as approved by BHEL/Architect.Each WC set shall be provided with approved quality of seat, rubber buffers and chromium plated hinges. Seat shall be so fixed that it remains absolutely stationary in vertical position without falling down on the WC.Each WC shall be provided with suitable connector connecting the ceramic outlet of WC to CI pipe.					

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
Urinals					
<p>Urinals shall be lipped type half stall with glazed vitreous China of size as called for in the Bill of Quantities.</p> <p>Half stall urinals shall be provided with suitable CP spreader, suitable CP domical waste and CP cast brass bottle trap with pipe and wall flange and shall be fixed to wall by CI brackets, CI wall clips and CP brass screws as recommended by manufacturer complete as directed by the BHEL.</p> <p>Flushing for urinals shall be by means of no hand operation, infrared electric flush valve with complete kit of plumbing, electrical and electronic items, infrared photo cells, solenoid valve transformer and electrical connection. The automatic flush sensor plate shall be flush and press fitted and be of high quality mirror polish finish. Each urinal shall be provided with one flush valve unit.</p> <p>Flush pipes shall be GI pipes concealed in wall chase but with chromium plated bends at inlet and outlet.</p>					
Urinal Partitions					
<p>Urinal partitions shall be white glazed vitreous china of size specified in the BOQ.</p> <p>Porcelain partitions shall be fixed at proper heights with CP brass bolts, anchor fasteners and MS clips as recommended by the manufacturer and directed by BHEL.</p>					
Wash Basin					
<p>It shall be white glazed vitreous china of size, shape and type specified in the BOQ. Each basin shall be provided with painted MS angle or CI brackets and clips and the basin securely fixed to wall/counter slab. Placing of basins over the brackets without secure fixing shall not be accepted. The MS angle shall be provided with two coats of red oxide primer and two coats of synthetic enamel paint of make, brand and colour as approved by BHEL. The cost of fixing the basin shall be inclusive of supply and installation of brackets as described above. Each basin shall be provided with suitable CP waste with overflow, pop-up waste or rubber plug and CP brass chain as specified in the BOQ. Each basin shall be provided with hot and cold water mixing fitting or as specified in the BOQ.</p>					
Sinks					
<p>Sinks shall be stainless steel or any other material as specified in the BOQ. Each sink shall be provided with painted MS or CI brackets and clips and securely fixed. Counter top sinks shall be fixed with suitable painted angle iron brackets or clips as recommended by the manufacturer. Each sink shall be provided with suitable dia CP waste and rubber plug with CP brass chain as given in the BOQ. The MS angle shall be provided with two coats of red oxide primer and two coats of synthetic enamel paint of make, brand and colour as approved by BHEL. Sanitary fittings for sinks shall be deck mounted or wall mounted CP swivel faucets with or without hot and cold water mixing fittings as specified in the BOQ.</p>					
Toilet Paper Holder					
<p>Toilet paper holder shall be white glazed vitreous china or chrome plated of size, shape and type specified in the BOQ. Porcelain toilet paper holder shall be fixed in walls and set in cement mortar 1:2 (1 cement : 2 coarse sand) and fixed in relation to the tiling work. The latter (chrome) shall be fixed by means of screws/capping having finish similar to the toilet paper holder in wall/temper partitions with raw l plugs or nylon sleeves. When fixed on timber partition, it shall be fixed on a solid wooden base member provided by the BHEL.</p>					
Towel Rail					
<p>Towel rail shall be chromium plated brass or of stainless steel or powder coated brass of size, shape and type specified in the BOQ. Towel rail shall be fixed with screws/capping having finish similar to the towel rail in wall with raw l plugs or nylon sleeves and shall include cutting and making good as required or directed by BHEL.</p>					

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
Liquid Soap Dispenser:					
Liquid Soap Dispenser shall be wall/counter mounted suitable for dispensing liquid soaps, lotions, detergents. The cover shall lock to body with concealed locking arrangement, opened only by key provided.					
WATER SUPPLY (COLD & HOT)					
PIPING MATERIALS					
The piping system shall consist of heavy class galvanized iron pipes and fittings conforming to IS: 1239. The piping system shall also consist of CPVC pipes and fittings. The sizes and makes are specified in the BOQ. For any internal works, the pipes and fittings shall be embedded in the wall chase. No unsightly exposed runs shall be permitted. Outside the building the piping shall be installed at least 1.0 m below the finished grade level.					
WATER METERS					
Water meters of approved make and design shall be supplied for installation at locations as shown. The water meters shall meet with the approval of local supply authorities. Suitable valves and chambers or wall meter box to house the meters shall also be provided along with the meters. The meters shall conform to Indian Standard IS: 779 and IS: 2373. Provision shall also be made to lock the water meter. The provision shall be such that the lock is conveniently operated from the top. Where the provision is designed for use in conjunction with padlocks, the hole provided for padlocks shall be a diameter not less than 4mm.					
Installation of Water Meter and Stop Cock					
The G.I. Lines shall be cut to the required lengths at the position where the meter and stop cock are required to be fixed. Suitable fittings shall be attached to the pipes. The meter and stop cock shall be fixed in a position by means of connecting pipes, jam nut and socket etc. The stop cock shall be fixed near the inlet of the water meter. The paper disc inserted in the ripples of the meter shall be removed. And the meter installed exactly horizontal or vertical in the flow line in the direction shown by the arrow cast on the body of the meter. Care shall be taken that the factory seal of the meter is not disturbed. Wherever the meter shall be fixed to a newly fitted pipe line, the pipe line shall have to be completely washed before fitting the meter.					
VALVES					
All valves (gate, globe, check, safety) shall be of gun metal suitable for the particular service as specified. All valves shall be of the particular duty and design as specified. Valves shall either be of screwed type or flanged type, as specified, with suitable flanges and non-corrosive bolts and gaskets. Tail pieces as required shall be supplied along with valves. Gate, globe and check valves shall conform to Indian Standard IS:776 and non-return valves and swing check type reflux to IS:5312. Sluice valves, where specified shall be flanged sluice valves of cast iron body. The spindle, valve seat and wedge nuts shall be gunmetal. They shall generally have non-rising spindle and shall be of the particular duty and design as specified. The valves shall be supplied with suitable flanges, non-corrosive bolts and asbestos fiber gaskets. Sluice valves shall conform to Indian standard IS:780 and IS:2906.					
(a) BALL VALVES: Valves 50mm dia and below shall be screwed type ball valves with stainless steel balls spindle Teflon seating and gland packing tested to a hydraulic pressure of 20 Kg/Sq.cm. and accompanying couplings and steel handles to BIS – 5351.					

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
<p>(b Valves above 50mm dia. shall be Butterfly Valves.Cast iron (IS 210), grade FG 260 butterfly valves conforming to PN 1.0, heavy duty cast iron disc with anti corrosive nickel plating, nitrile seat and stainless steel 410 stem with lever/gear operation and powder coated finish.Float Valves to be fixed in storage tanks shall consist of cast brass lever arm having copper balls (26 SWG) screwed to the arm integrally. The copper ball shall have bronze welded seams. The closing/opening mechanism incorporating the piston and cylinder shall be non-corrosive metal and include washers. The size and construction of ball valves and float shall be suitable for desired working pressure operating the supply system. Where called for brass valves shall be supplied with brass hexagonal back nuts to secure them to the tanks and a socket to connect to supply pipe. All valves shall be suitable for the working pressure involved.</p>					
<p>CONNECTIONS TO RCC WATER TANKS</p>					
<p>The successful bidder shall provide all inlets, outlets, washouts, vents, ball cocks, overflows control valves and all such other piping connections including level indicator to water storage tanks as called for. All pipes crossing through RCC work shall have puddle flanges fabricated from MS/GI pipes of required size and length and welded to 6/8 mm thick MS plate. All puddle flanges must be fixed in true alignment and level to ensure further connection in proper order.Full way gate valves of a approved make shall be provided as near the tank as practicable on every outlet pipe from the storage tank except the overflow pipe. Overflow and vent pipes shall terminate with mosquito proof grating.The overflow pipe shall be so placed to allow the discharge of water being readily seen. The overflow pipe shall be of size as indicated. A stop valve shall also be provided in the inlet water connection to the tank. The outlet pipes shall be fixed approximately 75mm above the bottom of the tank towards which the floor of the tank is sloping to enable the tank to be emptied for cleaning.</p>					
<p>PIPE PROTECTION (FOR COLD WATER PIPES BURIED IN TRENCHES / GROUND / EARTH)</p>					
<p>All buried pipes shall be cleaned and protected against corrosion by applying two layers of 2 mm thick multi-layer anticorrosive polymeric mix tape applied over a coat of primer as per recommendations of the manufacturers and placed on concrete blocks with PUF saddles dipped in bitumen at every 2 meters. The pipes where laid under floor shall be encased with 100 mm thick jamuna sand all around in addition to protective coating as described above.</p>					
<p>THRUST BLOCKS:</p>					
<p>In case of bigger pipes (80 mm dia and above), thrust blocks of cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) shall be constructed on all bends as directed by BHEL.</p>					
<p>MASONRY CHAMBER:</p>					
<p>i. All masonry chambers for stop cocks, sluice valves and meter etc. shall be built as per supplied drawings. ii. The excavation for chambers shall be done true to dimension and level indicated on plans or as directed by the BHEL representative. iii. Concrete shall be of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size). iv. Brick shall be of class designation 75 in cement mortar 1:5 (1 cement : 5 fine sand) v. Inside Plastering not less than 12 mm thick shall be done in cement mortar 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement.</p>					

PART-3 PRICE BID FOR PLUMBING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
INTERNAL DRAINAGE (SOIL, WASTE, VENT &RAIN WATER PIPES)					
PIPING MATERIALS					
3.1 Cast Iron Pipes					
<p>Cast iron pipes and fittings shall be of good and tough quality and dark grey on fracture. The pipes and fittings shall be true to shape, smooth and cylindrical, their inner and outer surface being as nearly as practicable concentric. They shall be sound and nicely cast, shall be free from cracks, taps, pinholes and other manufacturing defects. The pipes and fittings shall conform to IS:3989 / IS:1729 as called for. Fittings shall be of required degree with or without access door. All access doors shall be made up with 3mm thick insertion rubber gasket of white lead and tightly bolted to make the fittings air and water tight. The fittings shall be of the same manufacture as the pipes used for soil and waste.</p> <p>All CI pipes and fittings shall bear the manufacturer's name and ISI specification to which it conforms.</p> <p>All pipes and fittings shall be coated internally and externally with the same material at the factory, the fittings being preheated prior to total immersion in a bath containing a uniformly heated composition having a tar/other suitable base. The coating material shall have good adherence and shall not scale off. The coating shall be smooth and tenacious and hard enough not to flow when exposed to a temperature of 77 degree C but not so brittle at a temperature of '0' degree C as to chip off when scratched lightly with a pen knife. All pipes and fittings before installation at site shall be tested hydrostatically to a pressure of 0.45 Kg/sq. cm without showing any sign of leakage, sweating or other defects of any kind. The pressure shall be applied internally and shall be maintained for not less than 15 minutes. All these tests shall be carried out in the presence of the representative of BHEL. Alternatively a test certificate from manufacturers be obtained before despatch of material to site.</p> <p>Cast Iron Specialities</p> <p>If required, Cast iron speciality items such as deep seal floor traps, urinal traps, trap integral pieces with integral inlet/outlet connections, manhole cover with frame, chamber cover etc. shall be fabricated to suit individual location requirements. The successful bidder shall arrange the fabrication of these items from an approved source.</p> <p>Lead Caulked joints with Pig Lead:</p>					

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
<p>Cast Iron Class (LA) pipes All drainage passing under building floor and passing through retaining wall shall be cast iron class (LA) pipes (IS : 1536) Cast iron class (LA) pipe shall be such that they could be cut, drilled or machined. Pipe centrifugally cast in unlined water cooled moulds shall be heat treated in order to achieve the necessary mechanical properties and to relieve casing stress; provided that the specified mechanical properties are satisfied.</p> <p>Material Cast iron pipe shall be centrifugally spun cast iron pipe and conforming to IS:1536-1976</p> <p>Fittings Fittings shall be used for cast iron class (LA pipes shall conform to IS:1538-1976). Whenever possible junction from branch pipe shall be made by wyes. All cast iron water main pipes and fittings shall be manufactured to IS:1536 of tested quality. The pipes and fittings shall either be spigot and socket type or as called for. The pipes and fittings shall be of uniform material throughout and shall be free from all manufacturing defects.</p> <p>Joints Cast iron class (LA) pipe used for soil and waste pipes shall be jointed with refined pig lead conforming to IS:27-1977, sufficient skein of jute rope shall be caulked to leave minimum space of 25 mm for the pig lead to be poured in. After pouring the lead shall be caulked in to the joint with caulking tools and hammer of proper width. All surface lead shall be out and joint left flush with the rim of the socket. One continuous lead pour shall be thoroughly caulked at least 3 time around.</p> <p>Laying i. Fittings used for CI drainage pipe shall conform to IS:1538-1976. Wherever possible junction from branch pipes shall be made by a Y/tee. ii. Lead Caulked joints with Pig Lead iii. The spigot of pipe of fittings shall be centered in the adjoining socket by caulking. Sufficient turns of tarred gasket shall be given to leave a depth of 45 mm when the gasket has been caulked tightly home. Joining ring shall be placed round the barrel and against the face of the socket. Molten pig lead shall then be poured to fill the remainder of the socket. This shall then be done in one pouring. The lead shall then be solidly caulked with suitable tools and hammers weighting not less than 2 Kgs. iv. For lead wool joints the socket shall be caulked with tarred gasket, as explained above. The lead wool shall be inserted into the sockets and tightly caulked home skin by skin with suitable tools and hammers of not less than 2 Kg weight until joint is filled.</p>					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

SUMMARY

Sl. No.	<u>SUMMARY OF FIRE ALARM AND PUBLIC ADDRESS SYSTEM</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	SUB-HEAD - I - FIRE ALARM SYSTEM	
2	SUB-HEAD - II - ASPIRATION SYSTEM	
3	SUB-HEAD - III - PUBLIC ADDRESS SYSTEM	
TOTAL COST OF PART-4 FIRE ALARM AND PUBLIC ADDRESS SYSTEM		

PART-3 PRICE BID FOR PLUMBING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
<p>TRAPS</p> <p>Floor Traps Floor traps where specified shall be siphon type full before P or S type cast iron having a minimum 50 mm deep seal. The trap and waste pipes when buried below ground shall be set and encased in cement concrete blocks firmly supported on firm ground or when installed on a sunken RCC structural slab. The blocks shall be in 1:2:4 mix (1 cement: 2 coarse sand: 4 stone aggregate 20 mm nominal size). Successful bidder shall provide all necessary shuttering and centering for the blocks. Size of the block shall be 30 x 30 cms of the required depth.</p> <p>Floor Trap Inlet /Hopper Bath room traps and connection shall ensure free and silent flow of discharging water. Where specified, successful bidder shall provide a special type of floor inlet fitting fabricated from GI pipe, with one, two or three inlet sockets welded on side to connect the waste pipe. All joint between waste hopper and CI inlet socket shall be lead caulked. Inlet shall be connected to a CI "P" trap. Floor trap inlet and the traps shall be set in cement concrete blocks where buried in floors without extra charge. All fabricated hopper shall be hot dip galvanized.</p> <p>Floor Trap Grating Floor and urinal traps shall be provided with 100 – 150 mm square or round stainless steel gratings, with frame and rim of approved design and shape or as specified in the BOQ approved by the BHEL. Floor trap grating shall be fixed in floor with trap in cement mortar matching with the colour of floor.</p> <p>Cleanout Plugs Floor Clean Out Plug Clean out plug for soil, waste or rain water pipes laid under floors shall be provided near pipe junctions bends, tees, "Ys" and on straight runs at such intervals as required as per site conditions. Cleanout plugs shall terminate flush with the floor level. They shall be threaded and provided with key holes for opening. Cleanout plugs shall be cast brass suitable for the pipe dia. With screwed to a GI socket. The socket shall be lead caulked to the drain pipes.</p> <p>Cleanout on Drainage Pipes Cleanout plugs shall be provided on head of each drain and in between at locations indicated on plans or directed by BHEL representative. Cleanout plugs shall be of size matching the full bore of the pipe but not exceeding 150 mm dia CO plugs on drains of greater diameters shall be 150 mm dia. fixed with a suitable reducing adapter. Floor cleanout plugs shall be cast brass. Cleanouts provided at ceiling level pipe shall be fixed to a CI flanged tail piece. The cleanout doors shall be specially fabricated from light weight galvanized sheets and angles with hinged type doors with fly nuts, gasket etc. as per drawing.</p>					
<p>PIPE PROTECTION Cast iron soil and waste pipes under floor in sunken slabs and in wall chases (when cut specially for the pipe) shall be encased in cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 stone aggregate of 12 mm size) 10 cm bed and allround. When pipes are running well above the structural slabs, the encased pipes shall be supported with suitable cement concrete pillars of required height and size at intervals directed by the BHEL.</p>					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB-HEAD -I - FIRE ALARM SYSTEM					
1.	Supply, Installation, Testing & Commissioning of Microprocessor based intelligent, addressable, modular networkable, 10 loops capacity for detector and devices (each loop shall have minimum 100 addresses), fire alarm control panel with 1/4 VGA display / LCD display /320 Character with soft keys for displaying alarm, events and operating functions, Compatible with graphic user interface to pin point the identification of the fire location and fire alarm system control, Diagnostic functions for total current consumption, Day/Night operation function, Remote maintenance service feature etc.The panel shall have second CPU as hot redundant CPU capable of taking over full system in the event of first CPU fails with out human intervension.				
	The panel shall be capable to operate on 240 volts AC power supply, automatic battery charger, 24 volts, sealed lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 minutes during emergency condition and the power supply redundancy (two power supply cards to achieve the redundant power supply) complete as required. Both systems to be integrated with each other and Fire Detection & Alarm System. (UL's Latest Edition/EN54/VDS Approved)	Set	1		
2.	Supply, Installation, Testing and Commissioning of the GUI based main network Fire Detection software including computer hardware . GUI must be capable of graphically representing each facility being monitored with floor plans and icons depicting the actual locations of the various systems; and / or sensors' locations. The GUI software shall be located in control room in one of the Floors and shall monitor all the Floor Fire Detection, panel connected with each other. The software shall provide the facility to Monitor, Control, complete as required.	No	1		

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.	Operator work station complete with necessary compatible operating and fire alarm system control software, complete as specified including following accessories.				
a.	Operator work station with PC having Intel I7 Processor including Serial ports (RS232) and USB ports and following accessories etc. complete with software all as specified.				
b.	2 Gigabytes of RAM memory				
c.	500 Gigabytes of hard disk space				
d.	DVD ROM				
e.	19" TFT colour monitor				
f.	Mouse with Mouse Pad				
g.	Standard Key Board				
h.	Latest Windows Operating System				
i.	Compatible Fire Alarm System Control Software				
j.	Display–Dual Monitor AGP Card with 256 MB memory				
k.	Laser Printer- 1 No	Job	1		
4.	Supply, Installation, Testing & Commissioning of Network Repeater Panel with minimum 320-characters; The LCD shall Display all events / detectors, devices status of complete systems in the network, The NRP shall be equipped with Keypad. Provision for mounting annunciator box and blanking modules shall be provided in the NRP. Complete with battery, battery charger and other accessories as per Main Fire Alarm Panel such as Fibre Optics Network Cards etc as required and as per specifications .	Each	2		

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5.	Supply, Installation, Testing & Commissioning of Intelligent addressable Photoelectric type Multisensor Photo thermal Smoke Detector with two inbuilt optical smoke sensors with backward & forward scattering light angles as well as additional heat detector sensor with decentralise intelligence with inbuilt isolator or with isolator in base, with base etc as per specification as required.(UL's Latest Edition/EN54/VDS Approved)	Nos	564		
6.	Supply, Installation, Testing and Commissioning of Multi Cooperative Sensing Type Analog addressable Laser Type detector /OT blue (Detector with blue LED) with inbuilt isolator or with isolator in base with mounting based LED, with base etc as per specification as required.(UL's Latest Edition/EN54/VDS Approved)	Nos.	23		
7.	Supplying, assembling, erection, testing & commissioning of Response Indicator which consists of steady glowing LED. This LED shall be mounted within a M.S. box and connected in parallel to the built in indicator of the detector as per specifications. The RI shall come "ON" as soon as the detector activates complete in all respects as per specification.	Nos.	268		
8.	Supply, Installation, Testing & Commissioning of addressable Control Module for tripping of AHU, Fire Damper etc. including all relays, contacts etc. complete as required.(UL's Latest Edition/EN54/VDS Approved)	Nos	45		
9.	Supply, Installation, Testing & Commissioning of addressable Monitor Module for sprinkler flow switch, Aspiration System etc. complete as required. (UL's Latest Edition/EN54/VDS Approved)	Nos	46		
10.	Supply, Installation, Testing & Commissioning of Intelligent addressable Manual Call Point with inbuilt isolator or isolator before and after, break glass type with alarm LED as detailed complete as required. (UL's Latest Edition/EN54/VDS Approved)	Nos	16		

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
11.	Supply, Installation, Testing and Commissioning of Directional Sounders with 20 hz to 20 khz operating frequency with minimum 8 distinct sound patterns to direct Occupants for fast & safe Evacuation complete as required. (UL's Latest Edition/EN54/VDS Approved)	Nos	16		
12.	Supply, Installation, Testing and Commissioning of Strobe Lights with 110 cd. (UL 9th Edition/EN 54 Approved) complete as required. (UL's Latest Edition/EN54/VDS Approved)	Nos.	16		
13.	Supplying, installation, testing and commissioning of Decorative EXIT Luminaire , LED 230V AC/DC with constant power output ballast, addressable, IP 44, min. 100 mm height, viewing distance upto 22m including support horizontal/ vertical/ wall/ ceiling brackets etc. complete in all respects (Single way or two way as per drawings)	Nos.	30		
14.	Supplying and laying following sizes of HPSR, overall screened, HFLS, sheathed, fire resistant copper conductor twisted pair cable. The cable shall have C/W/Z rating to withstand temperature of 950°C complete with all accessories, terminations, glands etc. as per specification in all respect as per BS 6387, BS 50200, basic design as per BS 7629.				
14.1	2 x 1.5 sqmm	Rmt.	6500		
15.	Supplying and fixing of following sizes of MS conduit along with the accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required.				
15.1	20mm dia.	Rmt.	2000		

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
15.2	25mm dia.	Rmt.	2500		
16.	Supplying and fixing of following sizes of MS flexible pipe with PVC coating along with all ancillaries and accessories like coupler etc. as required.				
16.1	25 mm dia.	Rmt.	750		
17.	Supplying and fixing of following size of DWC (double walled corrugated) (outside corrugated, inside plain) HDPE pipe (confirming to IS:14930) along with all accessories/fittings for protection of under ground cables at a depth of 1000mm including excavation & refilling the trench etc. as required & as approved by the Engineer Incharge.				
17.1	50mm dia.	Rmt.	150		
SUB TOTAL OF SUB-HEAD -I - FIRE ALARM SYSTEM					

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB-HEAD - II - ASPIRATION SYSTEM					
ASPIRATION DETECTORS					
1.	Supply, installation, testing and commissioning of One channel - two pipe, Laser/Blue LED Air Sampling Detection Unit . The unit should be UL and FM approved complete as per specifications. The cost will include Power Supply Unit for above detector 230 V AC to 24 V DC 1.5 Amp with 24 hour battery backup in normal condition and 30 minutes in alarm condition etc. complete with as per specifications. The cost will also include the necessary software including graphical user interface, control and monitoring features to be installed on the PC as described earlier in the BOQ, remote monitoring facility fitted with programmer module for the entire network, High Level Interface for converting RS-485 to RS-232 signals for use with PC based central monitoring along with remote socket etc. all complete as per specifications. Manufacturers offering one pipe versions will supply double the number of systems under this item in the same total cost.	Nos.	15		
2.	Supply, installation, testing and commissioning of Capillary Sampling Points with length upto 1.5 m etc. complete with as per specifications.	Nos.	10		
3.	Supply, installation, testing and commissioning of 25 mm OD PVC/ABS PIPE with end caps and all accessories as required, complete in all.	Mtrs.	3000		
SUB TOTAL OF SUB-HEAD - II - ASPIRATION SYSTEM					

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB-HEAD - III - PUBLIC ADDRESS SYSTEM					
1.	Supply, Installation, Testing & Commissioning of Digital Voice Evacuation system including panels, other hardwares & softwares-capable of supervision of all circuits and 2 way Communication Fire Fighters Telephone System including panels, other hardwares & softwares-capable of supervision of all circuits. The Digital Voice Evacuation system capable of taking upto 24 zones to be with required suitable amplifiers and hardwares like MIC, racks etc. for 500 nos speakers (as mentioned in this tender) and accessories required to complete the systems. Both systems to be integrated with each other (Fire Detection & Public address System).	Nos.	1		
2.	Supply, Installation, Testing and Commissioning of Fire panel supervised 70db-84db Ceiling Mounted Speakers Cum Hooter complete with ceiling arrangements and all accessories etc.	Nos.	349		
3.	Supply, Installation, Testing and Commissioning of Fire panel supervised 70dB-84dB Wall Mounted Speakers Cum Hooter complete with wall mounting arrangement and all accessories etc.	Nos.	6		
4.	Supply, Installation, Testing and Commissioning of 2 way communication Fire Fighter's Telephone Jack fitted on wall including the cast of breaking and making good the wall wherever required.	Nos.	39		
5.	Supply, Installation, Testing and Commissioning of 2 way communication Fire Fighter's Handset complete with all accessories.	Nos.	4		
6.	Supplying, Installing, Testing and Commissioning of addressable Control Module for Fire Fighters Telephone circuit complete.	Nos.	39		

PART-4 PRICE BID FOR FIRE ALARM AND PUBLIC ADDRESS SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
7.	Supplying and drawing following sizes of FRLSH PVC insulated flexible copper conductor single core cable in the existing surface/ recessed PVC/steel conduit/ PVC casing and capping:				
7.1	3 x 1.5 sq.mm.	Rmt.	100		
7.2	3 x 2.5 sq.mm.	Rmt.	100		
7.3	3 x 4 sq.mm.	Rmt.	250		
8.	Supplying, laying, terminating & connecting of 2 core 24/0.20 sq.mm flexible copper conductor cable with terminations, labour and other petty material etc. complete in all respect.	Rmt.	4500		
9.	Supplying & drawing following pair. 0.5mm dia FR PVC insulated copper conductor, unarmoured telephone cable in existing surface / recessed steel / PVC conduit as required.				
9.1	2 pair	Rmt.	2000		
SUB TOTAL OF SUB-HEAD - III - PUBLIC ADDRESS SYSTEM					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-5 PRICE BID FOR FIRE FIGHTING WORK

SUMMARY

Sl. No.	<u>SUMMARY OF FIRE FIGHTING WORK</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	SUB HEAD - I - (Wet Riser System - Pumping Equipments)	
2	SUB HEAD - II - (Hydrants System)	
3	SUB HEAD - III - (Piping, Valves and Accessories)	
4	SUB HEAD - IV - (Fire Extinguishers)	
5	SUB HEAD - V (Motor Control Panels)	
6	Sub Head - VI - (Cable Tray, Cabling and Earthing)	
7	Sub Head - VII -(Fire Suppression System)	
TOTAL COST OF PART-5 FIRE FIGHTING WORK		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - I - (Wet Riser System - Pumping Equipments)					
1	Supply, Installation, Testing and Commissioning of Electric Driven Main Fire Pump suitable for auto operation & consisting of following: complete in all respect as required.				
a)	Horizontal Split casing type, centrifugal, multistage, pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 kg/sq. cm. at highest and farthest outlet at specified flow of 2850 lpm at 70 Mtr. head confirming to IS 1520.				
b)	Suitable HP (Minimum 75 hp) squirrel cage induction motor, TEFC synchronous speed 1500 RPM (with permissible slip), suitable for operation on 415 volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure, horizontal foot mounted type with Class-' F' insulation, confirming to IS-325.				
c)	Common base frame fabricated out of M.S channel of suitable size, flexible coupling, coupling guard, foundation bolts and pressure gauge with valve etc. Suitable cement concrete foundation duly plastered, with anti vibration pads etc. complete as per manufacturer's design & standards and as per detailed specifications.	Set	2		
2	Supply, Installation, Testing and Commissioning of Diesel Engine Driven Main Fire Pump suitable for auto operation and consisting of following: complete in all respect as required.				
a)	Horizontal Split casing type, centrifugal, multistage pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 kg/sq.cm. at highest and farthest outlet at specified flow of 2850 lpm at 70 Mtr. head confirming to IS 1520.				

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
b)	Suitable HP(Minimum 72 BHP) 1500 RPM, 4 stroke, cold starting type Diesel Engine with Heat Exchanger confirming to relevant BIS & IS Standards, complete with all required accessories / system , fuel oil filter, lubricant oil pump with filter, 2 Nos. starting batteries of 180 AH capacity each with suitable angle iron stand, engine starting panel having all the controls meters, gauges, tachometer, hour meters, starting switch with keys for manual starting, auto starting mechanism, 24 Volts electric starting equipment, Diesel Tank for 8 hrs continuous running of diesel engine, having minimum capacity of 200 Ltrs. (tank made out of 3mm thick M.S. Sheet with filling Cap, drain Cock, diesel indicator duly mounted on M.S. angle) exhaust pipe of minimum 30 Metre length, duly insulated with 50 mm. thick glass wool with 1.0 mm. thick aluminium sheet cladding, exhaust residential silencer, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required.				
c)	M.S. fabricated Common base frame, flexible coupling, coupling guard, foundation bolts and pressure gauge with valve etc. Suitable cement concrete foundation duly plastered, with anti vibration pads etc. complete as per manufacturer's design & standards and as per detailed specifications.	Set	1		
3	Supplying, Installation, Testing and Commissioning of Electric Driven Pressurization Pump (Jockey Pump) suitable for auto operation and consisting of following: complete in all respects as required.				
a)	Horizontal type, centrifugal end suction type pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal, gland packing and flow of 180 lpm at 70 Mtr. head confirming to IS:1520.				
b)	Suitable HP (Minimum 10 HP) squirrel cage induction motor TEFC type 2900 RPM suitable for operation on 415 volts, 3 phase 50 Hz. AC with IP 55 class of protection for enclosure, horizontal foot mounted type with Class '-F' insulation, confirming to IS:325.				
c)	Common base frame fabricated out of M.S channel of suitable size, flexible coupling, coupling guard, foundation bolts and pressure gauge with valve etc. Suitable cement concrete foundation duly plastered, with anti vibration pads etc. complete as per manufacturer's design & standards and as per detailed specifications.	Set	2		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
4	Fabricating, Supplying, Installation, Testing and Commissioning Air Vessel of continuous welded construction with flanged discharge header on the top of each riser fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, Air Release Valve complete with suitable drain arrangement with 25 mm dia gun metal wheel valve complete with all accessories etc. as required of the following sizes				
4.1	1.2 Meter high and 250 mm dia	Each	2		
5	Fabricating, Supplying, Installation, Testing and Commissioning Air Vessel of continuous welded construction with flanged discharge header in pump house fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, Air Release Valve, complete with drain arrangement with 25 mm dia gun metal wheel valve complete with all accessories etc. as required of the following sizes				
5.1	2 Meter high and 450 mm dia suitable to operate Jockey Pump, Main Fire Pump & Diesel Engine Driven Fire Pump	Each	1		
SUB TOTAL OF SUB HEAD - I - (Wet Riser System - Pumping Equipments)					

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - II - (Hydrants System)					
1	Supplying and fixing 4 way 63 mm instantaneous Fire Brigade Inlet Connection (FBIC) comprising of gunmetal body and gunmetal instantaneous male inlet coupling conforming to IS:904 with plug and cap with chain as required with nuts & bolts and high pressure rubber gasket, suitable for 150 mm dia MS pipe connection etc. complete as required.	Each	1		
2	Supplying and fixing Single Headed Internal Hydrant Valve oblique pattern with instantaneous Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked, conforming to IS : 5290 (Type A), with 80 mm dia flanged inlet, with ABS cap and chain complete with all accessories etc. as required.	Each	13		
3	Supply, Installation, Testing and Commissioning 100% synthetic flax canvas Non-percolating FIRE hose (Type A), I.S.I marked 63mm dia x 15m long with stainless steel male & female couplings (ISI marked) bound & riveted to hose pipes with copper rivets and copper wire as required.	Each	40		
4	Supplying and fixing Stainless Steel branch pipe with 20mm dia nozzle conforming to IS:903. suitable for installation connections to hose coupling etc. as required.	Each	20		
5	Supplying and Fixing First Aid Hose Reel , wall mounting swinging type complete with drum & bracket of MS construction, spray painted in Post office Red, conforming to IS 884/1995 with upto date amendments, complete with the following as required.				
(a)	36 Meter long 20 mm dia water hose Thermoplastic (Textile reinforced) Type - 2 as per IS : 12585				
(b)	25 mm dia gun metal ball valve & nozzle.				
(c)	Drum and brackets for fixing the equipments on wall.				
(d)	Connection from riser with stop valve (gun metal) & M.S. Pipe	Each	13		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6	Supplying and Fixing of Weather Proof Hose Cabinet suitable for external yard hydrant / FBIC fabricated out of 2 mm thick M.S. sheet with 6 mm thick glazed glass door in front having locking arrangements, suitable to accommodate external hydrant with butterfly valve, 2 nos 15 Mtr. long hose reels, branch pipe / FBIC with all the necessary pipes, accessories, fittings etc., mounted on wall or raised brick platform and duly painted with PO Red externally and white internally with synthetic enamel paint, sign writing etc. complete in all respects as required at site and having minimum following dimensions.				
6.1	900 mm x 600 mm x 500 mm deep	Each	7		
7	SITC of pressure switches				
	Supplying, Installation, Testing and Commissioning of pressure switches suitable for operating with fire hydrant systems for working pressure of 6.5 Kg/cm ² including electrical control wiring with suitable copper conductor PVC insulated and sheathed control cable upto control panel, connections etc. complete as required.	Each	5		
8	SITC weather proof M.S cabinet size 900 mm x 2100 mm x 600mm				
	Supplying, installation, testing and commissioning of weather proof M.S cabinet size 900 mm x 2100 mm x 600mm deep fabricated from 1.6mm thick M.S. sheets and M.S angle 40mmx40mmx6mm complete with glass, locking arrangements to accommodate the following: -				
a)	Gunmetal single headed Hydrant valve - 1 No.				
b)	Fire Hoses 63mm, 15 M long with accessories - 2 Nos.				
c)	Short branch - 1 No.				
d)	First Aid hose Reel - 1 No.				
e)	Fire Extinguisher - 2 Nos.				
f)	Fireman's Axe - 1 No.				
g)	Pressure Gauge - 1 No.				
	The cabinet shall be painted with one coat of primer and 2 coats of synthetic enamel paint of approved shade.	Each	13		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
9	Supply, Installation, Testing and Commissioning External Yard Hydrant comprising of MS pipe 80 mm dia (heavy duty C class) from existing ring main to about 1 meter above ground level and Single Headed Stainless Steel External Yard Hydrant Valve with 80 mm dia flanged inlet, instantaneous stainless steel coupling of 63 mm dia with cast iron wheel ISI marked, conforming to IS : 5290 (Type A), with ABS cap and chain etc. complete with all accessories as required.	Each	7		
10	Providing and fixing single gunmetal suction collecting head as per IS: 904-1983, hose coupling (draw out connection) with female outlet as per 903 complete with 150 mm dia. G.I. Suction pipe (with puddle flange) with a foot valve with strainer complete as per drawings.	Each	1		
11	Providing and Fixing 15 mm dia gunmetal / brass quartzoid type Sprinkler Head with quartz bulb and set to operate at specified temperature.				
11.1	Pendent, 68° C, Chrome plated	Each	1380		
11.2	Side wall type, 68° C, Chrome plated	Each	40		
12	SITC of sprinkler installation valve				
	Supplying, Installation, Testing and Commissioning of Sprinkler installation valve with water gong, pressure gauge, drain valve etc as required 200 mm dia size etc. complete as required.	Each	1		
13	Supplying and fixing vane type water flow switch suitable for installation on 50 mm to 150 mm dia line for a service pressure upto 20 kg/sq. cm. of Potter / System sensor /Angus	Each	11		
SUB TOTAL OF SUB HEAD - II - (Hydrants System)					

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - III - (Piping, Valves and Accessories)					
SLTC of M.S. pipe on surface					
1.	Supplying, laying, fixing, testing and commissioning of following sizes (NB) of ISI marked heavy class M.S. pipes including cutting, threading, welding etc. and providing all fittings e.g. elbows, reducers, clamps, hangers, flanges, gaskets, nuts, bolts and washers etc. including painting of pipes and fittings with red paint over a coat of ready mixed primer, both of approved quality and shade including cutting holes and chases in brick or RCC walls/slabs and making good the same etc. complete in all respect as required.				
1.1	250 mm dia (6mm thick	Metre	20		
1.2	200 mm dia (6mm thick)	Metre	35		
1.3	150 mm dia	Metre	430		
1.4	100 mm dia	Metre	119		
1.5	80 mm dia	Metre	214		
1.6	65 mm dia	Metre	418		
1.7	50 mm dia	Metre	516		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
1.8	40 mm dia	Metre	356		
1.9	32 mm dia	Metre	329		
1.10	25 mm dia	Metre	3000		
2	Supplying, Laying, Testing and Commissioning of following sizes (NB) ISI marked heavy class M.S. pipes including cutting, screwing, welding etc. and providing all fittings such as elbows, reducers, flanges, gaskets, nuts, bolts and washers etc. including applying with one coat of readymix primer, wrapping the pipe with 4 mm thick wrapping tape of IWL/Kotak makes, laying the pipe so that the top of the pipe is at a depth of one meter below ground level including excavating trenches and then refilling the soil in layers not exceeding 20 cms. in depth, consolidating each deposited layer by ramming, watering etc. complete as required.				
2.1	150 mm dia	Metre	50		
2.2	80 mm dia	Metre	405		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Supplying, Installation, Testing and Commissioning of Butterfly valves of PN 1.6 rating of following sizes with nitrile Bronze / G.M. seat duly ISI marked and stainless steel stem with lever/gear operation and cast iron body in powder coated finish for fire fighting application complete in all respects confirming to IS: 13095 as required.				
3.1	200 mm dia	Each	5		
3.2	150 mm dia	Each	20		
3.3	80 mm dia	Each	2		
3.4	65 mm dia	Each	2		
4	Providing, Installation, Testing and Commissioning of double flanged cast iron Non-Return Valve , PN 1.6 of following sizes confirming to IS : 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required.				
4.1	250 mm dia	Each	1		
4.2	150 mm dia	Each	3		
4.3	65 mm dia	Each	2		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Providing, Installation, Testing and Commissioning of forged brass / Gun Metal Ball Valves with brass body chrome plated of following sizes as required.				
5.1	50 mm dia	Each	4		
5.2	40 mm dia	Each	11		
6	Supplying and Fixing Orifice Plate made of 6 mm thick, upto 200 mm outer dia. stainless steel with orifice (internal dia.) of required size in between flange & landing valve of external and internal hydrant to reduce pressure to working pressure of 3.5 Kg / cm ² complete as per specifications as required.	Each	31		
7	Supply, Installation, Testing and Commissioning of 150 mm dia Bourden type, Stainless Steel dial type Pressure Gauge including brass isolation valve and siphon pipe having calibration of 0 - 16 Kg / cm ² .	Each	18		
8	Supplying, Installation, Testing and Commissioning of CI body flanged (both ends) type serviceable suction / Y strainer with (stainless steel / brass mesh) conforming to relevant IS specifications amended upto date complete including providing and fixing nuts, bolts, washers, gaskets etc. complete as required.				
8.1	200 mm dia	Each	3		
8.2	80 mm dia	Each	2		
9	Supplying and Fixing of Fire Man's axe with heavy insulated rubber as per standard conforming to IS 926	Each	13		

PART-5 PRICE BID FOR FIRE FIGHTING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up plinth level (for pumps foundation)				
10.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	10		
SUB TOTAL OF SUB HEAD - III - (Piping, Valves and Accessories)					
SUB HEAD - IV - (Fire Extinguishers)					
1	ABC' stored pressure tupe dry Chemical Power (Mono-Ammonium Phosphate) fire extinguisher with fixing hanger, hose, brackets, screws etc. as required. 5 Kg. DCP/ABC type Fire Extinguishers.(For Office area)	Each	2		
2	ISI marked 10 Kg. capacity dry powder fire extinguishers with high pressure discharge hose, squeeze grip nozzle, 120 grams carbon dioxide cartridge, gunmetal cap with initial charge of dry powder. Both extinguisher and dry powder to be ISI marked.	Each	4		
SUB TOTAL OF SUB HEAD - IV - (Fire Extinguishers)					

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - V (Motor Control Panels)					
1	Fabrication, Supplying, Installation, Testing & Commissioning of Electrical Fire Motor Control Panel of cubical construction, floor mounted type, fabricated out of 2mm. thick CRCA sheet, compartmentalized with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, interconnection with solid aluminium strip / single core PVC insulated FRLS copper conductor cable, having suitable mountings for switchgears and accessories and internal control & power wiring with suitable rating PVC insulated FRLS copper conductor, earth terminals, numbering etc. complete in all respects, suitable for operation on 415 V, 3 phase 50 HZ AC supply with enclosure protection class IP 42 with 600 Amp aluminium bus bar etc complete as required.				
Incoming					
a)	MCCB, 4 Pole, 400 A, 35 KA with adjustable thermal magnetic release and rotary handle (ICS= ICU= 35 KA upto 415 V) - 2sets.				
b)	Digital Ammeter (0 - 400 A), 96 mm. sq. CT operated with inbuilt selector switch with 3 Nos. CT's of ratio 400/5 A, 15 VA burden and accuracy of class 1.0 - 2 Sets				
c)	Digital Volt Meter (0-500 V) 96 mm. sq. with inbuilt selector switch and control MCBs - 2 Sets				
d)	Phase Indicating coloured LED (RYB) with control MCBs - 2 Sets				
e)	400 A 4P ATS - 1 No.				
Bus Bar :					
Electrolytic high conductivity aluminium three phase and neutral busbars rated at 415V, 600 amps, 50Hz, AC, insulated with heat shrinkable coloured PVC sleeves & clip on shrouds for joints.					
Outgoing for Main Fire Pump					
a)	MCCB 3 Pole, 315 A (with adjustable thermal magnetic release and (Ics=Icu=25 KA upto 415 V), with CT operated digital Ammeter (0 - 300 A), with 3 CT's of 300/5 A, 10 VA, accuracy 1.0, ASS and coloured LED for on (Red) indication - 2Set				

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
b)	Fully Automatic Star Delta Starter suitable for sprinkler Pump motor of minimum 55-65 KW and (as per the recommendation of pump manufacturer) complete with over load protection, current sensing type single phase preventer complete with contactors, push button, indicators LED type Auto/manual selector switch all accessories and wiring etc. as required - 2 Set				
	Outgoing for Pressurization Pump				
c)	MCCB 3 Pole, 63 A, 25 KA with CT operated digital Ammeter (0 - 60 A), with 3 CT's of 60/5 A, 10 VA, accuracy 1.0, ASS and coloured LED for on (Red) indication with adjustable thermal magnetic release and (ICS = 25 KA upto 433 V) - 3 Set				
d)	Fully Automatic Star Delta Starter suitable for Jocky Pump (Minimum 15 HP capacity) complete with over load protection, current sensing type single phase preventer complete with contactors, push button, indicators LED type Auto/manual selector switch all accessories and wiring etc. as required - 2 Set				
e)	Selector switches for Auto / Manual operation, Local / Remote / OFF and ON / OFF / TRIP indications - 1 Sets (for terrace pump)				
f)	MCCB 4 Pole, 63 A, 25 KA - 1 Sets				
g)	MCB Double Pole, 16 A, 10 KA 'C' - 2 sets.				
	Diesel Engine Control				
h)	Auto / Manual selector switch and 3 attempt Starting device, Electronic timer, Relays, Auxiliary switches, Rotary switches, Tripping relays, Contactors, Push button for manual Start / Stop etc. to make the equipment automatic as per functional requirement.				
i)	Battery charging unit suitable for 24 V DC with boost and trickle charger, selector switch, with suitable rating transformer, rectifier, RC filter network, fuses on AC and DC protection, 0 - 30 V DC Digital Volt meter, 0 - 20 A DC Digital Ammeter, the charger should be cut off when the engine is started and the batteries shall be charged from battery charging alternator provided in the engine.				
j)	Suitable rating & type standard relays, contactors and other accessories for automatic operation of diesel engine				
k)	Indication LED's for high / low lub, oil pressure, water temperature, engine on indicator, with suitable alarms, acknowledgement button etc.				
	System Controller				

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
l)	Designing, Supply, Installation, Testing and Commissioning of system controller to control operation of Main Electric Fire Pumps, Diesel Engine Pump, Jocky Pumps, Terrace Pump in sequence as per specification consisting of relays, timers, sensors, annunciation window for fault indication, complete as per specification.				
m)	First Jocky pump will start than hydrant and sprinkler pump start, in case of failure of power diesel pump will start.				
n)	Colour coded internal wiring and connections etc. with suitable size Fire Retardant Low Smoke PVC insulated copper cable / solid aluminium strip / bus bar from incoming to bus bar and from bus bar to switch gears / MCCB, starters, meters, selector switches, indicating LED's, interlocking and sequence operation arrangements.				
o)	Terminal facility for repeat indicator of various audio and visual indications.				
p)	First Jocky pump will start than hydrant and sprinkler pump start, in case of failure of power diesel pump will start.				
q)	Colour coded internal wiring and connections etc. with suitable size Fire Retardant Low Smoke PVC insulated copper cable / solid aluminium strip / bus bar from incoming to bus bar and from bus bar to switch gears / MCCB, starters, meters, selector switches, indicating LED's, interlocking and sequence operation arrangements.				
r)	Terminal facility for repeat indicator of various audio and visual indications.	Set	1		
	Fire panel as above				
SUB TOTAL OF SUB HEAD - V -(Motor Control Panels)					

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
Sub Head - VI - (Cable Tray, Cabling and Earthing)					
1	Fabricating and Installing following size of perforated MS cable tray including horizontal and vertical bends, reducers, tees, cross members and other accessories as required and duly suspended from the ceiling with MS suspenders and including painting etc. as required.				
1.1	450 mm width x 50 mm depth x 2.0 mm thickness	Metre	20		
1.2	300 mm width x 50 mm depth x 1.6 mm thickness	Metre	20		
1.3	150 mm width x 50 mm depth x 1.6 mm thickness	Metre	20		
2	Supply, Laying, Fixing, Testing and Commissioning of following sizes of XLPE insulated PVC sheathed armoured Copper / aluminium conductor cable of 1.1 KV grade on existing cable tray / surface as required.				
2.1	4 core x 2.5 Sq mm copper conductor armoured control cable.	Metre	120		
2.2	3 core x 16 Sq.mm. Aluminium Armoured	Metre	100		
2.3	3 core x 70 Sq.mm. Aluminium Armoured	Metre	100		
2.4	3 core x 95 Sq.mm. Aluminium Armoured	Metre	80		
2.5	4 core x 16 Sq.mm. Aluminium Armoured	Metre	80		

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Supply and making end termination with brass compression gland and aluminium lugs for following size of XLPE insulated and PVC sheathed aluminium conductor cable of 1.1 KV grade as required.				
3.1	4 core x 2.5 Sq mm copper conductor armoured control cable.	Sets	12		
3.2	3 core x 16 Sq.mm. Aluminium Armoured	Sets	8		
3.3	3 core x 95 Sq.mm. Aluminium Armoured	Sets	8		
3.4	4 core x 16 Sq.mm. Aluminium Armoured	Sets	2		
4	Providing and fixing following size of GI strips/ GI wire etc. on surface or in recess for connections, including GI clamps etc. as required.				
4.1	32 mm x 6 mm GI strip	Metre	40		
4.2	25 mm x 5 mm GI strip	Metre	50		
4.3	6 SWG dia G.I. wire	Metre	200		
SUB TOTAL OF SUB HEAD - VI - (Cable Tray, Cabling and Earthing)					

PART-5 PRICE BID FOR FIRE FIGHTING WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - VII (FIRE SUPPRESSION SYSTEM)					
1	Supply, installation, testing and commissioning of 80 Ltrs capacity Seamless FM 200 Gas Cylinder with Siphon tube, Cylinder valve, low pressure Gauge & safety burst disc, complete in all respects (EKC / Worthington make)	Nos	5		
2	Supply of FM 200 gas (Dupont / GLCC make)	Kgs	300		
3	Supply and fixing of Electrical Actuators (Siemens / Fike / Kidde / Fenwal make)	No.	2		
4	Supply and fixing of Manual Actuators (Siemens / Fike / Kidde / Fenwal make)	Nos	4		
5	Supply and fixing of Pneumatic Actuators (Siemens / Fike / Kidde / Fenwal make)	Nos	4		
6	Supply and fixing of Discharge Hoses (Siemens / Fike / Kidde / Fenwal make)	Nos	4		
7	Supply and fixing of Pneumatic Hoses (Siemens / Fike / Kidde / Fenwal make)	Nos	4		
8	Supply of Nozzles (Siemens / Fike / Kidde / Fenwal make)	Nos	8		
9	Supply & laying of FM 200 Piping (MSL / Tata make)	Per Cylinder	5		
10	Supply of Manual Abort Station (Agni / Rawal / GST make)	No.	2		

PART-5 PRICE BID FOR FIRE FIGHTING WORK					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
11	Supply of Manual Gas Release Station (Agni / Rawal / GST make)	No.	2		
12	Supply of Discharge Sign Board	No.	2		
13	Supply, installation, testing and commissioning of FM200 Gas Release Panel (Agni / Rawal / GST make) and integrating it with the existing Fire Aarm and Detection System	No.	2		
SUB TOTAL OF SUB HEAD - VII -(FIRE SUPPRESSION SYSTEM)					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

SUMMARY

Sl. No.	<u>SUMMARY OF AUDIO VISUAL SYSTEM FOR BOARD ROOM</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	SUBHEAD - I (DIGITAL CONFERENCE SYSTEMS)	
2	SUBHEAD - II (VIDEO PROJECTION SYSTEM)	
3	SUBHEAD - III (AUTOMATIC CAMERA CONTROL)	
4	SUBHEAD - IV (CONTROL PANEL & CABLING)	
5	SUBHEAD - V (LIGHT DIMMING PANEL)	
TOTAL COST OF PART-6 AUDIO VISUAL SYSTEM FOR BOARD ROOM		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
(SH: PROVIDING DIGITAL CONFERENCE , AUDIO-VISUAL SYSTEM FOR BOARD ROOM, BHEL)					
SUBHEAD - I (DIGITAL CONFERENCE SYSTEMS)					
1	Supply, Installation, testing & Commissioning of Digital Chairman Unit with Boundry Layer Half super cardioid microphone, Priority button for muting delegates, Low susceptibility to mobile phones, Microphone 'on/off ' connection with digital Interface unit.				
a)	Frequency Response : 100 hz to 15 Khz	No.	1		
b)	Transducer Type : Condenser				
c)	Directional Pattern : Phase Coherent Cardioid				
d)	Sensitivity : 22 mV/Pa				
e)	Max SPL :120dB at THD 3%				
2	Supply, Installation, testing & Commissioning of Digital Delegate Unit to be shared between two delegate units consisting of Boundry Layer Half super cardioid microphone, Low susceptibility to mobile phones & Microphone 'on/off '				
a)	Frequency Response : 100 hz to 15 Khz				
b)	Transducer Type : Condenser	Nos.	12		
c)	Directional Pattern : Phase Coherent Cardioid				
d)	Sensitivity : 22 mV/Pa				
e)	Max SPL :120dB at THD 3%				

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Supply, Installation, testing & Commissioning of digital interface unit for two balanced audio inputs for line or Mic sources, two loudspeaker or headphone stereo socket, Voice activation features selectable from controller, digital audio transmission, loop through connection.	Nos.	13		
a)	Input Attenuation Selection : 0,6,12, or 18 dB				
b)	Phantom Power Supply : 2 x eight pole DIN				
c)	Headphone Socket : 3.5 mm stereo jack.				
4	Supply, Installation, testing & Commissioning of Digital Central Control Unit for control of all audio, 2x32 high quality audio channel, operation modes - Open / Override / Voice activated., Number of Open Microphone selection 1-4, Individual units Provides power to 60 Contribution Units, 2 Nos RS232 Ports for PC/Touch Panel control and Automatic Camera Control, LCD Display for status information.				
a)	Frequency Response : 30 Hz to 20 Khz (-3 dB)				
b)	Power Consumption : 200W				
c)	System Supply : 40V DC				
d)	THD : < 0.5%	No.	1		
e)	Signal to Noise ratio : > 87dBA				
f)	Cinch Nominal Input : 24dBV (+/- 6dB)				
g)	XLR Nominal output : 12dBV (+6/-24 dB)				
5	Supply, Installation, Testing and Commissioning of 6W low level loudspeaker under table installation, complete as required				
i	RMS Power : 6W	Nos.	12		
ii	Effective Frequency range : 200 Hz to 15 Khz				
iii	SPL @1W, 1mtr @ 1Khz : 90dB				
iv	Opening angle @ 4 Khz : 70 degrees				

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
6	Supply, Installation, Testing and Commissioning of Automatic Feedback Suppressor to eliminates feedback by actively filtering out the unwanted room reverb that leads to feedback using an echo-cancellation and de-reverberation algorithm complete as required	No.	1		
7	Supply, Installation, Testing and Commissioning of DSP processor unit with 12 inputs, 8 outputs, 12 control inputs/6 logic output, IP ethernet control, RS-232 control, built in Telephone Hybrid for Teleconference complete as required.	No.	1		
8	Supply, Installation, Testing and Commissioning of Dual Channel Power amplifier 200 Watts per channel, with Line Matching Transformer, complete as required	Nos.	2		
9	Supply, Installation, Testing and Commissioning of Handheld UHF wireless microphone complete as required	Nos.	1		
i	193 UHF Selectable frequencies				
ii	LCD display for battery indication frequency information				
iii	Auto tuning with reciever				
iv	PLL synthesized technology				
10	Supply, Installation, Testing and Commissioning of Collar UHF wireless microphone complete as required	No.	1		
i	193 UHF Selectable frequencies				
ii	LCD display for battery indication frequency information				
iii	Auto tuning with reciever				
iv	PLL synthesized technology				
11	Supply, installation, testing & commissioning of Professional Quality CD and flash card recorder , RS-232 control complete as required:	No.	1		
12	Supply, installation, testing & commissioning of High quality wall mount speaker with 2x 3.5" LF , and 0.75" HF, 10Watts power handling at 100 V inputs, Max power handling 75 Watt, Max power 75Watts, complete including wall brackets	Nos.	4		
SUB TOTAL OF SUBHEAD - I					

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - II (VIDEO PROJECTION SYSTEM)					
1	Supply, installation on Wall, testing & commissioning of 110" tab tensioned motorised Matt White finish electric screen with aspect ratio of 16:9 with remote Control and suitable for operation on 230 volt , 50 Hz AC supply complete etc. as required.	No.	1		
2	Supply, installation on Ceiling, testing & commissioning of Professional Projector with suitable short throw lens for projection for above 120" Screen from 2 to 2.5 mtr distance as per following minimum specification complete as required:				
a)	Brightness: 4000 lumens				
b)	WXGA, LCD				
c)	Resolution: WXGA (16:9/16:10)				
d)	Contrast: 1000:1				
e)	Manual zoom, focus and lens shift				
f)	Input #1: HDMI x1 (HDCP Compliant)				
g)	Input #2 D-sub 15 x1 (with HD15 loop through) Input #3 BNC x 5 (R,G,B,H,V & Y,Pb/Cb, Pr/Cr & Composite),	No.	1		
3	Supply, installation on Ceiling ,testing & commissioning of electrically operated Motorized type Projector Lift suitable for above Projector complete as required:	No.	1		
4	Supply Installation Testing and Commissioning of Scaler for Composite/S-Video to VGA/RGB signal with following minimum specification	Nos.	3		
i)	1xCV or 1xY/C inputs				
ii)	1 X VGA out				
5	Supply Installation Testing and Commissioning of RGBHV Matrix Switcher as per following minimum specification complete as required:				
i)	Input : 8 x VGA inupts with stereo audio				
ii)	Output : 4 x VGA				
iii)	Audio Input Gain & Attenuation				
iv)	350 Mhz RGB video Bandwith				
v)	Audio inputs / outputs follows video switching : -18 to 24 dB				

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
vi)	Control - RS-232	No.	1		
vii)	Switching speed : 20 msec				
6	Supply Installation Testing and Commissioning of Pop up Type table connectivity for computer as per following minimum specification complete as required:				
i)	Easy access to connectors				
ii)	Durable pneumatic movement and mechanical latching mechanism				
iii)	built-in Extender video and audio line driver				
iv)	Black or brushed aluminum				
v)	One female 15-pin HD connector, 3.5 mm stereo audio jack				
vi)	Two CAT 6 RJ-45 network/data/phone connectors;				
vii)	Compact size with square bezel				
viii)	Unswitched AC outlet				
ix)	CE compliant	Nos.	3		
7	Supplying, Installation, Testing & Commissioning of Professional Full HD LCD Display, 46" Diagonal , resolution 1366x768, brightness 700 cd/sqm, response time 8 ms, contrast ratio 5000:1, veiwing angle 178 Degree, HDMI, Serial Port, Built in Speaker,uniform Bezel width, with Network module having CPU, 2GB RAM, 32 HDD embedded windows xp software, including wall mounting bracket	Nos.	2		
SUB TOTAL OF SUBHEAD - II					
SUBHEAD - III (AUTOMATIC CAMERA CONTROL)					
1	Supplying, erecting, Testing & Commissioning High Speed High Resolution Speed Dome Camera with 520 TVL Lines Resolution, 1/3" OR 1/4 " CCD, Small Dome Enclosure, 360 " Contineous rotation/180" Panning, 99 Preposition, Auto Focus, Auto Iris, 28 X Optical Zoom Remote P/T/Z Control	Nos.	3		
2	Supplying, erecting, Testing & Commissioning High Resolution 1/3"CCD, 540TVL, 15 BIT DSP,Color processing, Fixed camera , smart backlight compensation, 5-50 mm variforcal auto iris lens	No.	1		

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3	Supplying, erecting, Testing & Commissioning Microprocessor Based Matrix Switcher for interfacing with CCU for automatic Control of P/T/Z Camera	No.	1		
4	Supplying, erecting, Testing & Commissioning Digital Keyboard with variable Speed joystick Pan/Tilt/Zoom Control	No.	1		
5	Supplying, erecting, Testing & Commissioning Operator Monitor 19", DVI Input	No.	1		
6	Supplying, Programming, Testing & Commissioning Automatic Camera Control Software	No.	1		
7	Supplying, erecting, Testing & Commissioning DVD Recorder with 320 GB Hard Disk Panasonic make model no DMR-EH69 or equivalent	No.	1		
SUB TOTAL OF SUBHEAD - III					
SUBHEAD - IV (CONTROL PANEL & CABLING)					
1	Supply, Erection, Programing, testing and commissioning of Touch panel Control Systems , IP enabled controller, equipped with 2x Bi-directional serial RS-232, 4x Bi-directional serial RS-232/ 422/ 485, 1x Bi-directional serial RS-485, 8x IR /serial output (IR up to 1.2 MHz), 8x General I/O, 2x Relay 24 V, max. 0.5 A, ports. internal IR sensors., front panel indicator LEDs, Web server and Admin Web pages for setup and diagnostics, Onboard real time clock with Battery Backup, Internal RAM 16 MB, Internal flash 16 MB, with Wireless Touch panel Active matrix color LCD Size 8.4", Wi-Fi connection provides easy network integration, Built-in Li-Ion rechargeable battery pack, Four programmable buttons, 802.11b/g Wi-Fi 2-way wireless communication with Tabletop Docking Stations.	Lot	1		

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
2	Supply & fixing Equipment Rack as per following minimum specification complete as required:				
i)	30 U Rack Cabinet , 600mm deep				
ii)	Made of Alluminium Frame				
iii)	Colour : As approved by Engineer in Charge.	No.	1		
3	Supplying and drawing following sizes of PVC insulated multistranded copper conductor wires / cable in the existing surface / recessed Galvanised steel conduit / GI floor trunking etc. including connectors / glands as per specifications complete as required. (for speaker / Plasma screen /Projector / controlers etc.)				
3.1	2 Core, 1.5sq mm, PVC Sheathed speaker cable for connecting speakers.	Mtr.	200		
3.2	2 Core Shilded Data / Microphone cable with copper spiral shield 24 AWG.	Mtr.	300		
3.3	Giga speed UTP 4 pair CAT-6 type computer data cable.	Mtr.	100		
3.4	VGA Cable	Mtr.	300		
3.5	Power cable 3 x 1.5Sq mm	Mtr.	100		
3.6	Conference Digital Cable including connectors	Mtr.	100		
3.7	Video Cable RG59	Mtr.	100		
SUB TOTAL OF SUBHEAD - IV					

PART-6 PRICE BID FOR AUDIO VISUAL SYSTEM FOR BOARD ROOM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUBHEAD - V (LIGHT DIMMING PANEL)					
1	Supplying, erecting, Testing & Commissioning of Light Control Panel 8 x 5 Amp iCAN programmable source controller module. 128 scene memory. Suitable for 20Amp single phase supply. Suitable for 4 circuits of resistive inductive and low voltage electronic transformer loads compatible with leading edge dimmers plus 4 circuits of HF ballast controllers. Compatible with both 0-> volt ballasts and Tridonic DSI ballasts. includes 4x12 Amp relays for power switching of Non-dim loads. Double pole MCB behind lockable hinged cover for unit protection and isolation. Dual iCAN net input. Audio Visual port (RS485), panic and auxiliary inputs. (Dimmer and cabling to be provided by others)	No.	1		
2	Supplying, erecting, Testing & Commissioning of Seven button program and replay control panel. Internally illuminated push buttons with legend "1", 2, "3", "4" and "Off" together with master raise and lower push buttons. Single gang removable Satin Stainless Steel Cover plate provides access to network point. Programmable fade time per button, in the range 0.5 seconds to 60 minutes.	No.	1		
SUB TOTAL OF SUBHEAD - V					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-7 COST OF CCTV AND ACCESS CONTROL SYSTEM

SUMMARY

Sl. No.	<u>SUMMARY OF CCTV AND ACCESS CONTROL SYSTEM</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	SUB HEAD - I - CCTV SURVEILLANCE SYSTEM	
2	SUB HEAD - II - ACCESS CONTROL SYSTEM	
TOTAL COST OF PART-7 CCTV AND ACCESS CONTROL SYSTEM		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-7 PRICE BID FOR CCTV & ACCESS CONTROL SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
SUB HEAD - I - CCTV SURVEILLANCE SYSTEM					
A	Supply, installation, testing and commissioning of CCTV Surveillance System complete with all accessories, components and required to make the system fully functional and comprising of the following equipment all as specified.				
1	Supply, installation, testing and commissioning of DVR-16-CH, 400/480fps display, 400f/480ps recording, H.264, Recording @704x480 (100/120ips)/ 704x240 (200/240ips)/ 352x240 (400/480ips), 8Audio In/ 1 Out, 16 Alarm In, 4 Relay Out, Network Port available for Remote View S/W with transmission up to 120 IPS @ 352x288 PAL, along with 2 TB HDD, complete all as specified with 230VAC power supply complete in all respects as per specifications-CCTV & Access Control Section-2.	Nos.	3		
2	Supply, installation, testing and commissioning of Joystick Keyboard for LCD display, for DVR/PTZ Camera Control, playback complete with for controlling 5 DVR complete in all respects.	No.	1		
3	Supply, installation, testing and commissioning of High Resolution 32 inch LCD colour TV monitor with on screen adjustment menu, durable metal cabinet etc. complete in all respects.	Nos.	3		
4	Supply, installation, testing and commissioning of Integrated High Speed PTZ Day/Night Outdoor Dome Camera assembly with 1/4" CCD Imager, 752x582 Pixel, Lens 18X Optical Zoom, Auto Focus, Auto Iris, Auto White Balance/Auto Gain Control, Digital Zoom 12x, Resolution 480 TVL, Sensitivity @ 30IRE Day Mode 0.4Lx/Night Model 0.05 Lx, S/N ratio >50dB, 360 Degree Continuous Panning, Min 64 Presets, IP66 Housing with Heater /Blower, Including Pole/Wall Mount Bracket, 230V PSU, along with 6m high G.I. Pole with foundation, Power Supply and all Ancillary Equipment etc. complete in all respects as per specifications-CCTV & Access Control Section-2.	Nos.	9		

PART-7 PRICE BID FOR CCTV & ACCESS CONTROL SYSTEM

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Supply, installation, testing and commissioning of dome type indoor coloured fixed camera with of 1/3" CCD,540 TVL, Sensitivity @ 30 IRE: Color 0.5Lx/Night Sense 0.18 Lx, AWB / BLC / AGC /Auto Black, 2.6 to 6 mm vari-focal lens Auto Iris, 12VDC/24VAC for indoor application, complete in all respects as per specifications-CCTV & Access Control Section-2.	Nos.	27		
6	Supply, drawing, installation, testing and commissioning of Video co-axial cable RG 11 in the existing surface / recessed steel conduit as required.	Metre	4500		
7	Supply, drawing, installation, testing and commissioning of armoured video co-axial cable RG 11 including trenching, excavation and backfilling as required.	Metre	1500		
8	Supplying and fixing of following sizes of steel conduit along with the accessories in surface / recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
a)	25mm dia.	Metre	6500		
b)	20 mm dia.	Metre	1000		
9	Supply and drawing of following sizes of PVC insulated copper conductor single core cable in the existing surface / recessed steel conduit as required.				
a)	3 x 2.5 sq.mm.	Metre	1500		

PART-7 PRICE BID FOR CCTV & ACCESS CONTROL SYSTEM					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
10	Supplying and fixing of following size of DWC (double walled corrugated) (outside corrugated, inside plain) HDPE pipe (confirming to IS :14930) along with all accessories/fittings for protection of under ground cables at a depth of 1000mm including excavation & refilling the trench etc. as required & as approved by the Engineer Incharge.				
a)	50mm dia.	Metre	500		
11	Supply, drawing, installation, testing and commissioning of PVC insulated and PVC sheathed Instrumentation cable with electrolytic grade annealed bare flexible copper conductor shielded cable 2 core 16/0.2mm cable in the existing surface / recessed PVC/steel conduit as required.	Metre	750		
SUB TOTAL OF SUB HEAD-I					
SUB HEAD - II - ACCESS CONTROL SYSTEM					
A	Supply, installation, testing and commissioning of access control system complete with all accessories, components and integration with the existing Lenel based Intelligent system controller (LNL-2220) and the existing Lenel make on-guard security management software; including the following:				
1	Supply, installation, testing & commissioning of Dual Reader Interface Module, for connecting the readers with the existing Lenel based Intelligent system controller (LNL-2220).	Set	9		
2	Supply, installation, testing and commissioning of Smart card Readers complete as per specification.	Nos.	18		

PART-7 PRICE BID FOR CCTV & ACCESS CONTROL SYSTEM					
S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
3.a	Supply, installation, testing and commissioning of Electromagnetic locks, suitable for single leaf door with magnetic contacts as per specification.	Nos.	24		
3.b	Supply, installation, testing and commissioning of Electromagnetic locks, suitable for double leaf door with magnetic contacts as per specification.	Nos.	3		
4	Supply, installation, testing and commissioning of exit push button, complete in all respects.	Nos.	17		
5	Supply, drawing, installation, testing and commissioning of PVC insulated and PVC sheathed 8 core (4 pair) 0.6 sq.mm. twisted pair standard cable in the existing surface / recessed PVC/steel conduit as required.	Metre	2700		
6	Supply, drawing, installation, testing and commissioning of following sizes of PVC insulated and PVC sheathed copper conductor cable in the existing surface / recessed steel conduit as required.				
a)	3 x 1.5 sq.mm.	Metre	2700		
7	Supplying and fixing of following sizes of steel conduit along with the accessories in surface / recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
a)	25mm dia.	Metre	2700		
SUB TOTAL OF SUB HEAD-II					

<u>NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"</u>		
<u>PART-8 COST OF SIGNAGE</u>		
<u>SUMMARY</u>		
<u>Sl. No.</u>	<u>SUMMARY OF SIGNAGE WORKS</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	TOTAL TOTAL COST OF SIGNAGE WORK	

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049

PART-8 PRICE BID FOR SIGNAGE WORK

S.NO. (1)	TYPE OF SIGN (2)	DESCRIPTION (3)	UNIT (4)	QTY (5)	QUOTED RATE (In Rs.) (6)	QUOTED AMOUNT (In Rs.) (7= 5 x 6)
1	CMD	Supply and fixing of Signage made of 18 gauge SS Plate of grade 304 wrapped with 3M Dinoc (or equivalent) Gold shade and letters to be cut and pasted of 3M Vinyl(or equivalent) as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M (or equivalent) mirror mount tape. Size 6 inch x 12 inch.	Nos	1		
2	DIRECTOR	Supply and fixing of Signage made of 18 gauge SS Plate of grade 304 wrapped with 3M Dinoc (or equivalent) Silver shade and letters to be cut and pasted of 3M Vinyl (or equivalent) as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape (or equivalent). Size 6 inch x 12 inch.	Nos	4		
3	VISITING DIRECTOR	Supply and fixing of Signage made of 18 gauge SS Plate of grade 304 wrapped with 3M Dinoc (or equivalent) Silver shade and letters to be cut and pasted of 3M Vinyl (or equivalent) as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape. Size 6 inch x 12 inch.	Nos	1		
4	CVO	Supply and fixing of Signage made of 18 gauge SS Plate of grade 304 wrapped with 3M Dinoc (or equivalent) Silver shade and letters to be cut and pasted of 3M Vinyl (or equivalent) as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape. Size 6 inch x 12 inch.	Nos	1		
5	ED	Supply and fixing of Signage made of 18 gauge SS Plate of grade 304 wrapped with 3M Dinoc (or equivalent) Silver shade and letters to be cut and pasted of 3M Vinyl (or equivalent) as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape. Size 6 inch x 12 inch.	Nos	8		

PART-8 PRICE BID FOR SIGNAGE WORK

S.NO. (1)	TYPE OF SIGN (2)	DESCRIPTION (3)	UNIT (4)	QTY (5)	QUOTED RATE (In Rs.) (6)	QUOTED AMOUNT (In Rs.) (7= 5 x 6)
6	GM	Supply and fixing of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc (or equivalent) pasted behind as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape (or equivalent). Size 6 inch x 12 inch.	Nos	18		
7	AGM	Supply and fixing of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc pasted behind as per design. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape size 6"x12"	Nos	49		
8	DGM/SDGM	Supply and fixing of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc (or equivalent) pasted behind as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape . Size 6 inch x 12 inch.	Nos	30		
9	DISPATCH	Supply and fixing of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc (or equivalent) pasted behind as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape . Size 6 inch x 12 inch.	Nos	3		
10	STORE	Supply and fixing of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc (or equivalent) pasted behind as per design approved by architect/BHEL. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape . Size 6 inch x 12 inch.	Nos	11		
11	WORKSTATIONS	Supply and fixing of Signage made of 3mm ACP with clear window for slidding inserts for names printed on 2mm white acrylic and fixed usign 3M mirror mount tape size 3"x6"	Nos	298		
12	PS	Supply and fixing of Signage to made of 3mm ACP with clear window for slidding inserts for names printed on 2mm white acrylic and fixed usign 3M mirror mount tape size 3"x6"	Nos	27		
13	ATTENDENT	Supply and fixing of Signage made of 3mm ACP with clear window for slidding inserts for names printed on 2mm white acrylic and fixed usign 3M mirror mount tape size 3"x6"	Nos	15		

PART-8 PRICE BID FOR SIGNAGE WORK

S.NO. (1)	TYPE OF SIGN (2)	DESCRIPTION (3)	UNIT (4)	QTY (5)	QUOTED RATE (In Rs.) (6)	QUOTED AMOUNT (In Rs.) (7= 5 x 6)
14	MEETING ROOM	Supply and fixing of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc pasted behind as per design. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape with slidding mechanism for occupied / vacant size 3"x8"	Nos	25		
15	FACILITY SIGNS LIKE WASH ROOM, AHU, ELECTRICAL, DEPARTMENT NAMES ROOM PANTRY ETC	Supply of Signage made of 6mm clear acrylic with mirror cut letter of 3M Vinyl / Dinoc pasted behind as per design. Edges to be buffed for smooth finish and fixed using 3M mirror mount tape size 6"x12'	Nos	100		
16	BOARD ROOM	Supply of illuminated sign made of Aluminum profile as per design approved by architect/BHEL with LEDs. Sign fascia with 3mm clear acrylic pasted with 3M vinyl (or equivalent) as per design approved by architect/BHEL and fixed to wall with key hole. Size 3 inch x 6 inch.	Nos	1		
17	ILLUMINATED DIRECTIONAL SUSPEND SIGNS	Supply & fixing of illuminated suspended signs made of Aluminum profile as per design approved by architect/BHEL with LEDs. Sign fascia with 3mm clear acrylic pasted with 3M vinyl (or equivalent) as per design approved by architect/BHEL and suspend with two rods from the ceiling.	Nos	50		
18	ILLUMINATED FIRE WAYFINDING SIGNS	Supply & fixing of 8mm Acrylic double sided with LED Light with battery backup of 2 hours suspended with Galvanised Rod with doom nut.	Nos	40		
19	ILLUMINATED FIRE WAYFINDING SIGNS	Supply and fixing of 8mm Acrylic single sided with LED Light with battery backup of 2 hours fixed to wall.	Nos	20		
20	LIFT DIRECTORY SIGNS	Supply and fixing of 3mm PVC single sided with Photo-luminous / Glow in Dark Vinyl (6-8 hours glow) fixed using 3M VHP tape (or equivalent).	Nos	4		
21	FLOOR DIRECTORY	Supply and fixing of Aluminium Extrusion profile with floor wise direction printed on 3M Vinyl (or equivalent) fixed to wall	Nos	15		

PART-8 PRICE BID FOR SIGNAGE WORK

S.NO. (1)	TYPE OF SIGN (2)	DESCRIPTION (3)	UNIT (4)	QTY (5)	QUOTED RATE (In Rs.) (6)	QUOTED AMOUNT (In Rs.) (7= 5 x 6)
22	STATUTORY SIGNS LIKE FIRE EXTINGWISHER, FIRE HOSE REEL, ETC	Supply and fixing of 3mm PVC single sided with Photo-luminous / Glow in Dark Vinyl (6-8 hours glow) fixed using 3M VHP tape (or equivalent).	Nos	60		
23	FIRE EVACUATION MAPS	Supply and fixing of 3mm Acrylic two layers sandwiched with photo- luminous and clear sheet with map printed as per design approved by architect/BHEL fixed with four SS studs.	Nos	20		
TOTAL QUOTED AMOUNT FOR SIGNAGE WORKS						

<u>NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"</u>		
<u>PART-9 COST OF LIFT WORK</u>		
<u>SUMMARY</u>		
<u>Sl. No.</u>	<u>SUMMARY OF LIFT WORKS</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	TOTAL COST OF LIFT INSTALLATION	

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-9 PRICE BID FOR LIFT WORK

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
	LIFT INSTALLATION				
1	Supplying and installing all side glass elevator 800 kg capacity, car size 1300 mmx1400mmx2300mm, 3 stop / 3 opening (all opening on the same side), entrance size 800mmx2100mm H including all necessary fixture as per specification including testing of installation.	EACH	2.00		
2	Hoistway with common wall, complete with glass on all sides for glass elevator	no.	2.00		
3	Providing and installing handicap lift as per specification including testing of installation.				
	ELECTRO HYDRAULIC LIFTING TABLE-ZERO LEVEL	EACH	1.00		
	CAPACITY 300 KG				
	PLATEFORM SIZE (LXW) 1600X 900 MM				
	LIFT HEIGHT 1200 MM				
	OVERALL LIFTED HEIGHT 1550 MM				
	LOWERED HEIGHT OF PLATFORM 45 MM				
	LOWERED HEIGHT OF SIDE PROJECTION 350 MM				
	OVERALL SIZE OF BASE FRAME STRUCTURE 1600 X 1500 MM				
4	Supplying and installing of service lift capacity 1020 kgs@1 mps with 6 stops with opening on the same side, controlled by micro processor based modular control system with cabsize 1000 mmx2400mm with all necessary human interface device as per specification including testing of installation.	EACH	1.00		

S.NO. (1)	DESCRIPTION OF ITEMS (2)	UNIT (3)	QTY (4)	QUOTED RATE (In Rs.) (5)	QUOTED AMOUNT (In Rs.) (6= 4 x 5)
5	Providing and installing dumbwaiter lift counter weight type 200kg cabin size 1150X1050X900MM approximately panels shall made of SS sheet hairline finish including vinyl flooring with 2 floor gates and 1 cabin gate with automatic push button operation central including testing all complete.	EACH			
	TOTAL COST FOR LIFT INSTALLATION				
	Suggested makes- OTIS, MITSUBISHI,KONE				

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-10 COST OF FURNITURE (MODULAR)

SUMMARY

<u>SNO.</u>	<u>DESCRIPTION</u>	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	MODULAR FURNITURE (LIST 1) (CMD & Directors' Furniture)	
2	MODULAR FURNITURE (LIST2) (General Office Furniture)	
3	CUSTOMIZED FURNITURE	
TOTAL COST OF PART-10 COST OF FURNITURE (MODULAR)		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-10 PRICE BID FOR FURNITURE WORK (MODULAR)

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
LIST - 1 FURNITURE					
A	GROUND FLOOR				
V	BOARD ROOM				
1	Board room table (in veener finish):Providing & Supplying Board Room Table. U-Shape Conference table of Size 7000x2000x800mm 1)Worktop(Overall Thickness -37mm) clad with 0.4mm Veneer on substrate of MDF using PU glue for better adhesion duly finished with melamine polish. Worksurface shall be 37.5mm thick (18mm MDF+18mm one side Prelam Board +0.4mm Veneer) in Approved Colour . 2) Edge shall be sealed with 2mm Teakwood Lipping. 3) Legs shall be made from 36mm Pre-Laminated Particle Board (18+18) having straight profile with half round edges and clad with 0.6mm thick Post-forming laminate. Overall thickness of the leg shall be 38mm. in Black Laminate 4) Modesty Panel shall be made of Pre-Laminated board of 18mm thick in Black Laminate 5) Each seater module shall have dimensions 1360W x 750 D The above furniture should be as per specification and sample approved by Engineer in-charge. Godrej Model- Senete/BP Ergo Model- Crescendo Veneer	Nos.	1		
2	Chair hi back:Visitor Chair,Cushioned Aluminium Arm,Chrome Base, Gas Lift, PU Leatherite Tapestry Godrej Model- Halo HB/BP Ergo Model- ES123	Nos.	26		
3	Serving counter/storage(in veener finish)(3000x500X800) Godrej Model- Serving Counter/BP Ergo Model- Credenza Veneer	Nos.	1		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
B	FIRST FLOOR				
I	CMD's CABIN				
1	CMD chair hi back in leather:High Back Chair,Wooden Arm,Chrome Base,Gas Lift,PU Leatherite Tapestry Godrej Model- Halo VHB/BP Ergo Model- ES115	Nos.	1		
2	Visitor chair mid back in leather:Medium Back Chair,Wooden m,Chrome Base,Gas Lift,PU Leatherite Tapestry Godrej Model- Halo/BP Ergo Model- ES116	Nos.	7		
3	Sofa 3 Seater sofa in leather Godrej Model- Tiger/BP Ergo Model- ES1026	Nos.	2		
4	Sofa 1 Seater in leather(Same Family as above) Godrej Model- Tiger/BP Ergo Model- ES1026	Nos.	2		
5	Coffee table (in veneer finish) Godrej Model- Victoria/BP Ergo Model- ES1026 Coffee table	Nos.	2		
6	Corner Table (in veneer finish)(Same Family as above) Godrej Model- Edward/BP Ergo Model- ES 1026 Corner Table	Nos.	3		
7	Sofa chair in leather Godrej Model- Sizzel/BP Ergo Model- Es1014 Single Sofa Chair	Nos.	4		
II	CMD's ANTEE ROOM				
1	Recliner in leatherite Godrej Model- Wales/BP Ergo Model- Ergo Recliner	Nos.	1		
2	Sofa 3 Seater sofa in leatherite Godrej Model- Jenirio/BP Ergo Model- ES1023 3 Seater	Nos.	1		
3	Sofa 2 Seater sofa in leatherite Godrej Model- Jenirio/BP Ergo Model- ES1023 2 Seater	Nos.	1		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
4	Coffee table (in veneer finish) Godrej Model-Bloom/BP Ergo Model- ES1026 Coffee Table	Nos.	1		
5	Corner Table (in veneer finish)(Same Family as above) Godrej Model- Bloom/BP Ergo Model- ES1026 Corner Table	Nos.	2		
6	Sofa chair in leatherite Godrej Model- Sizzel/BP Ergo Model- ES1002	Nos.	2		
7	Dining table glass top Godrej Model- Morgan/BP Ergo Model- ES741	Nos.	1		
8	Dining chair Mid back in leatherite Godrej Model-Ebony/BP Ergo Model- ES722	Nos.	4		
III CMD CONFERENCE					
1	Conference table (10 pax) (in veneer finish) in 3000x1500mm Godrej Model- Talk/BP Ergo Model- Essemble Veneer	Nos.	1		
2	Chair mid back in leather finish Godrej Model- Morarch mid Back/BP Ergo Model- Es420	Nos.	10		
3	wooden console (in veneer finish) 2500x450x750mm Godrej Model- Maestro Credenza/BP Ergo Model- Element KD Fitting	Nos.	1		
IV CMD PS AREA					
1	PS table(in veneer finish),2000x900x750mm Godrej Model- Icon/BP Ergo Model- Recta Main Veneer	Nos.	4		
2	Site Unit(in veneer finish) 900x450x750mm Godrej Model- Icon/BP Ergo Model- Recta Side Veneer	Nos.	4		
3	Back unit(in veneer finish),3500x600x750mm Godrej Model- Icon + Icon/BP Ergo Model- Recta Back Unit Veneer	Nos.	1		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
4	over head unit(in veener finish),3500x450x900mm Godrej Model- over head unit/BP Ergo Model- Over head veneer	Nos.	1		
5	Printing area(in veener finish),1800x600x750mm Godrej Model- Over head unit/BP Ergo Model- KD fitting Veneer	Nos.	2		
6	storage lowheight(in veener finish),1500x450x750mm Godrej Model-Icon/BP Ergo Model- Credenza Veneer	Nos.	2		
V	CMD PS AREA WAITING				
1	3 Seater sofa in leatherite Godrej Model-Jenirio/BP Ergo Model- ES 1027-3 Seater	Nos.	2		
2	2 Seater sofa in leatherite Godrej Model- Jenirio/BP Ergo Model- ES 1027-2 Seater	Nos.	3		
3	Coffee table (in veener finish Legs & Glass Top)800dia, Godrej Model- Bloom/BP Ergo Model- Sun Coffee Table	Nos.	2		
3	over head unit(in veener finish),3500x450x900mm Godrej Model-Over head unit/BP Ergo Model- Over Head veneer	Nos.	1		
4	Corner table (in veener finish)Square Table 900(W) x 900(D) x 460(H) Godrej Model- Bloom/BP Ergo Model- Jupiter Corner Table	Nos.	6		
5	Magazine rack (in veener finish),900x400x1800ht Godrej Model- Magazine rack/BP Ergo Model- Opus in Veneer	Nos.	2		
VI	Director 's RM (Finance & Power)				
1	Director's chair high back in leather finish Godrej Model- Halo HB/BP Ergo Model- ES411	Nos.	2		
2	visiting chair mid back in leather finish Godrej Model- Halo MB/BP Ergo Model- ES412	Nos.	10		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
3	Sofa 3 Seater sofa in leatherite Godrej Model- Tiger/BP Ergo Model- ES1030 3 Seater	Nos.	2		
4	Sofa 1 Seater in leatherite Godrej Model- Tiger/BP Ergo Model- ES1030 2 Seater	Nos.	2		
5	Coffee table (in veneer finish),1200x600mm Godrej Model- Victoria/BP Ergo Model- ES1026 Coffee Table	Nos.	1		
6	Sofa chair in leatherite Godrej Model-Sizzel/BP Ergo Model- ES1002	Nos.	2		
7	Corner Table (in veneer finish) Godrej Model- Edward/BP Ergo Model- ES1026 Corner Table	Nos.	4		
VII	Director PS (Finance & Power)				
1	PS table (in veneer finish),1500x900mm Godrej Model- Trident Junior/BP Ergo Model- Recta Main Veneer	Nos.	6		
2	Back unit(in veneer finish),4500x400x750mm Godrej Model- Trident/BP Ergo Model- Recta Side Veneer	Nos.	2		
3	Over head unit(in veneer finish),4500x400x900mm Godrej Model- Over head Unit/BP Ergo Model- Recta Back Unit Veneer	Nos.	2		
4	Chair high back in leatherite Godrej Model- Kareena/BP Ergo Model- ES415	Nos.	6		
VIII	Waiting (Finance & Power)				
1	3 Seater sofa in leatherite Godrej Model- Rio/BP Ergo Model- ES1014 - Seater	Nos.	2		
2	2 Seater sofa in leatherite Godrej Model- Rio/BP Ergo Model- ES1014- 2 Seater	Nos.	2		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
3	Coffee table (in veneer finish),1200x600mm Godrej Model- Bloom/BP Ergo Model- ES1026 Coffee Table	Nos.	2		
4	Corner Table (in veneer finish) Godrej Model- Bloom/BP Ergo Model- ES1026 Corner Table	Nos.	6		
5	Sofa chair in leatherite Godrej Model- Sizzel/BP Ergo Model- ES1002	Nos.	4		
6	Storage Unit (in veneer finish),1000x450x750mm Godrej Model- Storage Unit/BP Ergo Model- Credenza Vener	Nos.	2		
IX	Director 's Antee RM				
1	3 Seater sofa Sofa in leatherite Godrej Model- D-alpina/BP Ergo Model- ES1020- 3 Seater	Nos.	2		
2	2 Seater sofa Sofa in leatherite Godrej Model- D-alpina/BP Ergo Model- ES1020- 2 Seater	Nos.	2		
3	Coffee table in glass top,1200x600 Godrej Model- Bloom/BP Ergo Model- ES1021 Glass Coffee Table	Nos.	2		
4	Corner Table in glass top Godrej Model- Bloom/BP Ergo Model- ES1021 Glass Corner Table	Nos.	6		
5	Storage Unit (in veneer finish),900x450x750mm Godrej Model- Storage Unit/BP Ergo Model- Credenza Veneer	Nos.	2		
X	Director's meeting room				
1	Meeting table (15 pax) (oval shape in veneer finish),4000x2000mm Godrej Model- Talk/BP Ergo Model- Ensemble Boat Veneer	Nos.	2		
2	chairs mid back in leatherite Godrej Model- Kareena/BP Ergo Model- ES603	Nos.	30		
3	wooden storage unit (in veneer finish),1500x450x750mm Godrej Model- Maestro/BP Ergo Model- Credenza Veneer	Nos.	6		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
C	SECOND FLOOR				
I	Director 's RM (R&D / HR)				
1	Director's chair hi back Godrej Model- Halo HB/BP Ergo Model- ES411	Nos.	2		
2	visiting chair mid back Godrej Model- Halo MB/BP Ergo Model- ES412	Nos.	10		
3	Sofa 3 Seater in leather Godrej Model- Tiger/BP Ergo Model- ES1030 3 Seater	Nos.	2		
4	Sofa 1 Seater in leather Godrej Model- Tiger/BP Ergo Model- ES1030 1 Seater	Nos.	2		
5	Coffee table in veneer finish,1200X600 Godrej Model- Victoria/BP Ergo Model- ES1026 Coffee Table	Nos.	2		
6	Corner Table in veneer finish Godrej Model- Edward/BP Ergo Model- ES1026 Corner Table	Nos.	4		
II	Director 's PS (R&D / HR)				
1	PS table(in veneer finish),1500x900mm Godrej Model- Trident Junior/BP Ergo Model- Recta Main Veneer	Nos.	6		
2	Back unit(in veneer finish),4500x600x750mm Godrej Model- Trident/BP Ergo Model- Recta Back unit veneer	Nos.	2		
3	Overhead unit(in veneer finish),4500x450x900mm Godrej Model- Over Head Unit/BP Ergo Model- Over head venner	Nos.	2		
4	Chair high back Godrej Model- Kareena/BP Ergo Model- ES415	Nos.	6		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
III	WAITING				
1	3 Seater(leatherite) Godrej Model- Midas/BP Ergo Model- ES1014 3 Seater	Nos.	4		
2	1 Seater(leatherite) Godrej Model- Midas/BP Ergo Model- ES1014 1 Seater	Nos.	2		
3	Coffee table ,1200x600mm Godrej Model- Bloom/BP Ergo Model- ES1026 Coffee Table	Nos.	2		
4	Corner Table, 600x600mm Godrej Model- Bloom/BP Ergo Model- ES1026 Corner Table	Nos.	8		
IV	Director 's Antee RM				
1	2 Seater Sofa Godrej Model- D-alpina/BP Ergo Model- ES1020 2 Seater	Nos.	4		
2	Sofa 1 Seater Godrej Model- D-alpina/BP Ergo Model- ES1020 1 Seater	Nos.	2		
3	Coffee table in glass 900dia Godrej Model-Bloom/BP Ergo Model- ES1021 Glass coffee table	Nos.	2		
4	Corner Table in glass Godrej Model-Bloom/BP Ergo Model- ES1021 Glass Corner table	Nos.	4		
V	Director's meeting room				
1	meeting table(14 pax) (in veener finish),4000x1200mm Godrej Model- Talk/BP Ergo Model- Ensemble Veneer	Nos.	2		
2	chairs mid back Godrej Model- Kareena/BP Ergo Model- ES603	Nos.	28		
3	wooden storage unit (in veener finish)1200x450x750mm Godrej Model- Maestro/BP Ergo Model- Credenza Veneer	Nos.	2		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
VI	VISITING DIRECTOR				
1	Director's chair hi back Godrej Model- Halo HB/BP Ergo Model- ES411	Nos.	1		
2	visiting chair mid back Godrej Model- Halo MB/BP Ergo Model- ES412	Nos.	5		
3	Sofa 3 Seater in leather Godrej Model- Tiger/BP Ergo Model-ES1030 3 Seater	Nos.	1		
4	Sofa 1 Seater in leather Godrej Model- Tiger/BP Ergo Model- ES1030 1 Seater	Nos.	1		
5	Coffee table in veneer finish,1200x600mm Godrej Model- Victoria/BP Ergo Model- ES1026 Coffee Table	Nos.	1		
5	sofa chair Godrej Model- Senete/BP Ergo Model- Godrej Model- Sizzel/BP Ergo Model- ES1002	Nos.	2		
6	Corner Table in veneer finish Godrej Model- Senete/BP Ergo Model- Godrej Model- Edward/BP Ergo Model- ES1026 Coffee table	Nos.	3		
7	PS Table ,1500x900x750 Godrej Model- Senete/BP Ergo Model- Godrej Model- Finness/BP Ergo Model- Recta Main Table	Nos.	1		
8	Back unit,3000x450x750 Godrej Model- Finness/BP Ergo Model- Recta Back Unit	Nos.	1		
VII	CVO				
1	CVO's chair hi back(leatherite) Godrej Model- Halo HB/BP Ergo Model- ES411	Nos.	1		
2	visiting chair mid back(leatherite) Godrej Model- Halo MB/BP Ergo Model- ES412	Nos.	5		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
3	Sofa 3 Seater in leather Godrej Model- Tiger/BP Ergo Model- ES1030 3 Seater	Nos.	1		
4	Sofa 1 Seater in leather Godrej Model- Tiger/BP Ergo Model- ES1030 1 Seater	Nos.	1		
5	Coffee table in veneer finish,1200x600mm Godrej Model- Victoria/BP Ergo Model- ES1026 Coffee table	Nos.	1		
6	sofa chair in leather Godrej Model- Sizzel/BP Ergo Model- ES1002	Nos.	2		
7	Corner Table in veneer finish Godrej Model- Edward/BP Ergo Model- ES1026 Coffee table	Nos.	3		
VIII CVO PS AREA					
1	PS Table in veneer finish , 1500x900mm Godrej Model- Finness/BP Ergo Model- Recta Main Venner	Nos.	2		
2	Back unit in veneer finish,3000x600x750mm Godrej Model- Finness/BP Ergo Model- Recta back unit veneer	Nos.	1		
3	Overhead unit in veneer finish,3000x450x900mm Godrej Model-Over Head Unit/BP Ergo Model- Over head veneer	Nos.	1		
4	Chair high back Godrej Model-Kareena/BP Ergo Model- ES415	Nos.	2		
LIST 1 TOTAL					

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
LIST-2 (GENERAL FURNITURE)					
1	<u>WORKSTATION-</u>				
a)	<p>P/S workstation with the main partition of 69-75mm thickness and side partition to be 69-75mm thickness</p> <p>Main partition: Staff Workstation with Tile based partition of 69-75mm thickness of height 1200mm-1230mm made of 1.2-1.5mm thick CRCA/Aluminum epoxy powder coating including skirting of 100-150mm high with ABS plastic leveller and have 45-50mm clear space between two tiles for wire management facilities. Aluminum/CRCA steel parts shall have epoxy powder coating min 45microns. Cover Section (Raceways) coming above/below the worktop 85-100mm height made up of 0.7-1.0mm thick zincd /CRCA powder coated steel and the Worktop (1800x1500mm) in one piece is made of 25 mm thick E 1-Grade / Green prelaminated particleboard of approved shade supported by 1.2mm-2mm. thick, epoxy powder coated steel brackets. All flat edges shall be finished with hot melt PVC edge banding of 2mm Thickness on all sides. Fabric tiles along with One Marker and magnatic pinup Tile shall be provided for each user above the work surface and metal/PreLaminate (E 1 grade /Green) Tiles below the worktops.All worktops are closed with 25 mm thick E 1-Grade / Green prelaminated particleboard gable end of approved shade supported by 1.2mm-2mm. thick, epoxy powder coated steel brackets on both sides. Trims:Extruded aluminium, epoxy powder coated colour of min 45microns 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Front and Body: 0.7 /0.8mm. Powder coated steel. Castors: 2 Front Lockable Castors & 2 Std. CastorsWARRANTY:1YEARS Godrej Model- Stallion/BP Ergo Model- Connect75</p>	Nos.	298		
b)	<u>Bank Workstation-</u>				
	<p>Each Ws of Size-900mm x 600mm only in 25mm thick E-1 Grade /Green prelamine particle board.3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm. Front and Body: 0.7 /0.8mm. Powder coated steel.</p> <p>Castors: 2 Front Lockable Castors & 2 Std. Castors. (Partition and work top detail spec. refer item no. 1 a) WARRANTY:1YEARS Godrej Model- Stallion/BP Ergo Model- Connect75</p>	Nos.	3		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
c)	<u>Dispatch Workstation-</u>				
	Each Ws of Size-1500x600x900mm only in 25mm thick E-1 grade / Green pre laminate particleboard .3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm. Front and Body: 0.7 /0.8mm. Powder coated steel. Castors: 2 Front Lockable Castors & 2 Std. Castors. (Partition and work top detail spec. refer item no. 1 a)WARRANTY:1YEARS Godrej Model- Stallion/BP Ergo Model- Connect75	Nos.	2		
d)	<u>Printing Area Workstation-</u>				
	Each Ws of Size-1500mm x 600mm only in 25mm thick E-1 grade / Green pre laminate particle board. 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm. Front and Body: 0.7 /0.8mm. Powder coated steel. Castors: 2 Front Lockable Castors & 2 Std. Castors. (Partition and work top detail spec. refer item no. 1 a) WARRANTY:1YEARS Godrej Model- Stallion/BP Ergo Model- Connect75	Nos.	8		
1.1	<u>CPU Trolley-</u>				
	P/S CPU Trolley made of 1-1.2 mm thick CRCA/HR steel,duly powder coated of thickness not less than 45 micron of approved shade. Godrej Model- CPU Trolley/BP Ergo Model- Ergo CPU	Nos.	311		
1.2	<u>KeyBoard Tray-</u>				
	P/S Keyboard pull out tray made of 0.8 mm thick CRCA steel duly powder coated of minimum thickness 45 micron with metallic roller slides (Telscopic channels) on both sides. Godrej Model- KBPT/BP Ergo Model-Ergo KBT	Nos.	311		
1.3	<u>Staff Chair-</u>				
	Mid Back Chair <ul style="list-style-type: none"> •Adjustable seat height. •Backrest: Steel carrier, upholstered with moulded polyester mesh. •Armrests: All adjustable armrest with polyurethane (PU) armpads. •Base: Black nylon base. •Castors: Nylon / Fibreglass castors in black color. Heavy-duty twinwheel castors WARRANTY:1YEARS Godrej Model- Ultima Super 5102/BP Ergo Model- ES315				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
	Mid Back Chair-	Nos.	0		
2	69-75mm and above Thick MODULAR LOOSE PARTITION-				
	Tile based partition of 69-75mm thick of height 1200mm-1230mm and skirting height of 100-150mm including ABS plastic leveller and have 45- 50mm space between two tiles for wire management facilities.Frames made up of 1.2-1.5 mm thick CRCA steel/Almunium with epoxy powder coating.Vertical & Horizontal trims are made up of 1.2-.1.5mm thick CRCA steel/ aluminium extrusions.Cover Section (Raceways) coming above/below the worktop of 85-100mm height made up of 0.7/0.8mm thick CRCA powder coated steel.Fabric tiles along with one white marker board above the work surface and pre lam/metal tiles below the worktops. WARRANTY:1YEARS Godrej Model- Stallion/BP Ergo Model- Connect75	SFT.	950		
3	Free Standing Workstation-				
3.Ia)	GM Workstation-GM's Main Table of size 2400x900,side unit with Pedestal & Back Unit (All complete in veneer finish) Standard Desk Veneer Finish Leg Table Top/Gable:30mm-35mm thick Particle Board (E-1 Grade / Green), veneer finishes with matched edge-banding. Modesty:18mm-25mm thick Particle Board (E-1 Grade),veneer finishes. Side unit of size 1200 X 600. Top:30mm-35mm thick Particle Board (E-1 Grade / Green), veneer finishes with matched edge-banding. Support Pedestal: 19mm-25mm. thick particle board (E-1 Grade/ Green) size 560Hx500Dx400W, veneer finishes (Top and Front).Handles:I/D-Type Back Unit of size :4500 x 450mm x 725 mm -750mm Ht. Handles:Aluminum extruded with anodized color. WARRANTY:1YEARS Godrej Model-Stellar/BP Ergo Model- Icon	Nos.	18		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
b)	Chair High Back	Nos.	18		
	<p>Headrest: molded plywood, upholstered with molded high density foam can be adjusted in various positions to ensure most comfort.</p> <p>Backrest & Lumbar support: can be adjusted to support user's ergonomic and preference. Tension knob. Tilt lock control adjustment: allows user to lock backrest at a-predetermined positions within the full range of movement by pushing lever backward.</p> <p>Seat: Pressed and molded plywood with nylon plastic back covered, upholstered with molded high density foam. Ergonomic seat height adjustment accommodates individual physical requirement. Operated by lifting lever upwards.</p> <p>Armrest:All adjustable armrest up to 60-80 mm., with polyurethane (PU) armpads. Pivot adjustable. Base: Polished aluminum base. Castors:Nylon castors in black color. Heavy-duty twinwheel castors. Posture Control: 360 degree swivel, dual-action synchro-tilt with 5 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- Premium executive PCH 7000/BP Ergo Model- ES105</p>				
c)	Chair Mid Back (Visitor Chair)	Nos.	45		
	<p>Backrest & Lumbar support: can be adjusted to support user's ergonomic and preference. Tension knob</p> <p>Tilt lock control adjustment: allows user to lock backrest at a-predetermined positions within the full range of movement by pushing lever backward. Seat : Pressed and molded plywood with nylon plastic back covered, upholstered with molded high density foam.Ergonomic seat height adjustment accommodates individual physical requirement. Operated by lifting lever upwards.Armrest:All adjustable armrest up to 60-80 mm. with polyurethane (PU) armpads. Pivot adjustable.Base: Polished aluminum base.Castors:Nylon castors in black color. Heavy-duty twinwheel castors.Posture Control: 360 degree swivel, dual-action synchro-tilt with 5 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model-PCH 7001/BP Ergo Model- ES106</p>				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
3.II	SOFA-				
	Structure: Kiln dried hardwood/metal frame, premium grade S-Spring. Cushion: Seat cushion with high density foam, Back with integrated lumbar support. Legs:Tube in stainless steel. WARRANTY:1YEARS Godrej Model- Jenirio/BP Ergo Model- ES1025				
d)	Sofa 3 Seater	Nos.	0		
e)	Sofa 2 Seater	Nos.	1		
f)	Sofa 1 Seater	Nos.	7		
g)	Coffee Table	Nos.	18		
	Coffee Table 600D X 1200W Top:Rectangular shaped 25mm Veneer top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Victoria/BP Ergo Model- ES1026				
h)	Corner Table	Nos.	31		
	Corner Table 600D X 600W Top:Square shaped 25mm Veneer top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Edward/BP Ergo Model- ES1026				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
i)	sofa chair	Nos.	18		
	Sofa Chair: Structure: Kiln dried hardwood frame, premium grade S-Spring. Cushion: seat cushion with high density foam. Legs: Polished tube stainless steel. WARRANTY:1YEARS Godrej Model- Sizzel/BP Ergo Model- ES1002				
3.IIa)	AGM Workstation-AGM's Table of size 2100x900, side unit with Pedestal & Back Unit (in laminate finish) Standard Desk laminated finish Leg/gable Top:30mm thick Particle Board (E-1 Grade / Green), with PVC edge banding. Modesty:18mm-25mm. thick Particle Board (E-1 Grade / Green), laminate finishes. Gable:25mm thick Particle Board (E-1 Grade/ Green), with PVC edge banding with plastic leveller. Side unit:Top:25mm thick Particle Board (E-1 Grade / Green), with PVC edge banding with pedestal. Support Pedestal: 19mm-25mm. thick particle board (E-1 Grade / Green) size 560Hx500Dx400W, laminate(Top and Front).lockable with keys Handles:I/D-Type Back Unit: Size 2850x450mm x 725mm - 750 mm Height WARRANTY:1YEARS Godrej Model- Earl/BP Ergo Model- Pinnacle	Nos.	32		
b)	Chair High Back	Nos.	49		
	Headrest: molded plywood, upholstered with molded high density foam and jacketed with fabric.Backrest: Steel carrier, upholstered with molded polyester mesh fabric. Seat: Pressed and molded plywood with nylon plastic back covered, upholstered with molded high density foam and jacketed with fabric.Armrests: All adjustable armrest up to 60-80 mm., with polyurethane (PU) armpads. Base: Polished aluminum base. Castors: Nylon plastic castors in black color. Heavy-duty twinwheel castors. Posture Control: 360 degree swivel, dual-action synchro-tilt with 4 positions locking.Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- 7001D/BP Ergo Model-ES301				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
c)	visitor Chair mid back	Nos.	0		
	Seat: Pressed and molded plywood with nylon plastic back covered, upholstered with molded high density foam and jacketed with fabric. Armrests: All adjustable armrest up to 60-80 mm., with polyurethane (PU) armpads. Base: Polished aluminum base. Castors: Nylon plastic castors in black color. Heavy-duty twinwheel castors. Posture Control: 360 degree swivel, dual-action synchro-tilt with 4 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- 7002D/BP Ergo Model- ES406				
d)	sofa chair	Nos.	98		
	Sofa Chair: Structure: Kiln dried hardwood frame, premium grade S-Spring. Cushion: seat cushion with high density foam.Legs: Polished tube stainless steel. WARRANTY:1YEARS Godrej Model- Sizzel/BP Ergo Model- ES1002				
e)	Coffee table	Nos.	38		
	Coffee Table 500-600mm dia circular table Top:10 mm thick tampered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Vegas/BP Ergo Model- ES1026C				
3.IIIa	<u>CPU Trolley-</u>				
	P/S CPU Trolley made of 1-1.2 mm thick CRCA/HR steel, duly powder coated of thickness not less than 40-45 micron of approved shade. Godrej Model- CPU Trolley/BP Ergo Model- Ergo CPU	Nos.	49		
3.IIIb	<u>KeyBoard Tray-</u>				
	P/S Keyboard pull out tray made of 0.8 mm thick CRCA steel duly powder coated, of minimum thickness 45 micron, with metallic roller slides(Telescopic channels) on both sides. Godrej Model- KBPT/BP Ergo Model- Ergo KBT	Nos.	49		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
3.IV	<p>DGM Workstation-Main Rectangular Table Size- 1800mm X 900mm,Return Table Size-1050mm X 450mmx705- 725mm Ht. & Back Unit of Size 2400mm x 450mm x 725-750 mm Ht. Top: 25 mm. thick particle board (E1-Grade) clad with 0.6mm thick post formed laminate with 0.4mm backing laminate with flat edge duly sealed with 2mm thick PVC Edge-banding: 2 mm. PVC edge-banding Modesty:18mm thick Particle Board (E-1 Grade / Green).Gable:25 mm. thick pre-laminate particle board (E1-Grade / Green)Edge-banding 2 mm. PVC edge-banding with height adjustable leveling . Side Unit:25 mm. thick particle board (E1-Grade / Green) clad with 0.6mm thick post formed laminate with 0.4mm backing laminate with flat edge duly sealed with 2mm thick PVC Edge-banding: 2 mm. PVC edge-banding. Lock: Standard locking mechanism is provided with main and spare keys. Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with 400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Front and Body: 0.7 /0.8mm. Powder coated steel. Castors: 2 Front Lockable Castors & 2 Std. Castors WARRANTY:1 YEAR Godrej Model- Finness/BP Ergo Model- Astute</p>	Nos.	11		
a)	Chair High Back	Nos.	30		
	<p>Headrest: Polypropylene carrier, upholstered with molded high density foam and jacketed with special fabric. Backrest: Polypropylene cover, upholstered with molded polyester fabric. Seat: Pressed and molded plywood with polypropylene back covered, upholstered with molded high density foam and jacketed with fabric. Armrests: All adjustable armrest up to 60 mm with polyurethane (PU) armpads. Base: Black nylon base. Castors: Nylon castors in black color. Heavy-duty twinwheel castors able to stand up to 25 kgs per wheel. Posture Control: 360 degree swivel, synchronized knee-tilt with 5 positions locking. Gas-lift: Allows 7 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- PCH 9R01/BP Ergo Model- ES501</p>				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
b)	Visitor chair Mid Back	Nos.	0		
	<p>Seat / Backrest: Pressed and molded plywood, upholstered with molded high density foam and jacketed with fabric. Armrests: All adjustable armrest up to 60mm with polyurethane (PU) arm pads.</p> <p>Base: Black powder coat painted aluminum /PP base. Castors: Fiberglass castors in black color. Heavy-duty twinwheel castors.</p> <p>Posture Control: 360 degree swivel, dual-action synchro-tilt with 4 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- PCH5102/BP Ergo Model- ES502</p>				
c)	<u>CPU Trolley-</u>				
	P/S CPU Trolley made of 1-1.2 mm thick CRCA/HR steel, duly powder coated of thickness not less than 40-45 micron of approved shade. Godrej Model- CPU Trolley/BP Ergo Model- Ergo CPU	Nos.	30		
d)	<u>KeyBoard Tray-</u>				
	P/S Keyboard pull out tray made of 0.8 mm thick CRCA steel duly powder coated, of minimum thickness 45 micron, with metallic roller slides(Telescopic channels) on both sides. Godrej Model- KBPT/BP Ergo Model- Ergo KBT	Nos.	30		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
3.V	ED-PS Workstation-	Nos.	0		
	<p>ED-PS Workstation-Main Rectangular Table Size- 1800mm X 900mm,Return Table Size-1050mm X 450mmx705-725mm Ht. & Back Unit of Size 3500mm x 450mm x 725-750mm Ht. Top: 25 mm. thick particle board (E1-Grade) clad with 0.6mm thick post formed laminate with 0.4mm backing laminate with flat edge duly sealed with 2mm thick PVC. Modesty:18mm thick Particle Board (E-1 Grade / Green).Gable:25 mm. thick pre-laminate particle board (E1-Grade / Green)Edge-banding 2 mm. PVC edge-banding with height adjustable leveling . Side Unit:25 mm. thick particle board (E1-Grade / Greene) clad with 0.6mm thick post formed laminate with 0.4mm backing laminate with flat edge duly sealed with 2mm thick PVC Edge-banding: 2 mm. PVC edge-banding. Lock: Standard locking mechanism is provided with main and spare keys. Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with 400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Front and Body: 0.7 /0.8mm. Powder coated steel. Castors: 2 Front Lockable Castors & 2 Std. Castors. WARRANTY:1 YEAR Godrej Model- Finness/BP Ergo Model- Astute</p>				
a)	Chair High Back	Nos.	0		
	<p>Headrest: Polypropylene carrier, upholstered with molded high density foam and jacketed with special fabric. Backrest: Polypropylene carrier, upholstered with molded polyester mesh fabric. Seat: Pressed and molded plywood with polypropylene back covered, upholstered with molded high density foam and jacketed with fabric. Armrests: All adjustable armrest up to 60 mm with polyurethane (PU) armpads. Base: Black nylon plastic base. Castors: Nylon castors in black color. Heavy-duty twinwheel castors able to stand up to 25 kgs per wheel. Posture Control: 360 degree swivel, synchronized knee-tilt with 5 positions locking. Gas-lift: Allows 7 cm. of height adjustment.WARRANTY:1YEARS Godrej Model-PCH9R01/BP Ergo Model- ES307</p>				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
b)	Chair Mid Back	Nos.	0		
	Seat / Backrest: Pressed and molded plywood, upholstered with molded high density foam and jacketed with vinyl/fabric. Armrests: All adjustable armrest up to 60mm with polyurethane (PU) armpads. Base: Black powder coat painted aluminum / PP base. Castors: Nylon / Fiberglass castors in black color. Heavy-duty twinwheel castors.Posture Control: 360 degree swivel, dual-action synchro-tilt with 4 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- PCH5102/BP Ergo Model- ES424				
c)	sofa chair	Nos.	4		
	Sofa Chair: Structure: Kiln dried hardwood frame, premium grade S-Spring. Cushion: seat cushion with high density foam.Legs: Polished tube stainless steel. WARRANTY:1YEARS Godrej Model- Sizzel/BP Ergo Model- ES1002				
d)	Coffee table	Nos.	0		
	Coffee Table 500-600mm dia circular table.Top:10 mm thick tampered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs.WARRANTY:1YEARS Godrej Model- Vegas/BP Ergo Model- ES1026C				
e)	<u>CPU Trolley-</u>				
	P/S CPU Trolley made of 1-1.2 mm thick CRCA/HR steel, duly powder coated of thickness not less than 40-45 micron of approved shade.Godrej Model- CPU Trolley/BP Ergo Model- Ergo CPU	Nos.	8		
f)	<u>KeyBoard Tray-</u>				
	P/S Keyboard pull out tray made of 0.8 mm thick CRCA steel duly powder coated, of minimum thickness 45 micron, with metallic roller slides(Telscopic channels) on both sides. Godrej Model- KBPT/BP Ergo Model- Ergo KBT	Nos.	8		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
4	<u>ED Workstation(Veneer Finish Free Standing)-</u>				
a)	ED's Table of size 2800x1000, side unit of size 1200x600 with Pedestal & Back Unit of size 1850x450x725-750mm Ht. + tower assembly of 1700x400x1200 Ht. (in veneer finish) Standard Desk veneer Finish Leg/Gable. Top/Gable:30mm-35mm. thick Particle Board (E-1 Grade / Green), veneer finishes with matched 2 mm. veneer edge-banding. Modesty:18mm-25mm thick Particle Board (E-1 Grade / Green) with veneer finishes. SRU:Top:30mm-35mm thick Particle Board (E-1 Grade / Green) with veneer finishes with matched Teak Wood edge-banding. Leg/gable:18-25mm thick Partical Board (E1 Grade / Green) with veneer Finish. Support Pedestal: 19mm-25mm. thick particle board (E-1 Grade / Green) size 560Hx500Dx400W, veneer finishes.Handles:I/D-Type (AR). Back Unit: made of 30-35mm thick partical board (E1 Grade / Green) with veneer Finish. Pedestal:19mm-25mm thick particle board (E-1 grade / Green) with veneer finishes (Top and Front).Handles:I/D-Type aluminu.m extruded with anodized color. WARRANTY:1YEARS Godrej Model- ED Table/BP Ergo Model- Stellar	Nos.	8		
b)	Chair High Back	Nos.	8		
	Seat / Backrest: Pressed and molded plywood, upholstered with molded high density foam and jacketed with leather Armrests: All adjustable armrest up to 70 mm., and 5 lockingpositions with polyurethane (PU) armpads. Base: aluminum Die cast base. Castors: Nylon / Fiberglass castors in black color. Heavy-duty twin whee lecastors. Posture Control: 360 degree swivel, dual-action synchro-tilt with 4 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- Sedna VHB/BP Ergo Model- ES115				
c)	Visitor Chair Mid Back	Nos.	40		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
	Seat / Backrest: Pressed and molded plywood, upholstered with molded high density foam and jacketed with leather. Armrests: All adjustable armrest up to 70 mm., and 5 locking positions with polyurethane (PU) arm pads. Base: aluminum Die cast base. Castors: Nylon / Fiberglass castors in black color. Heavy-duty twin wheel castors. Posture Control: 360 degree swivel, dual-action synchro-tilt with 4 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY: 1 YEARS Godrej Model- Sedna HB/BP Ergo Model- Es116				
	SOFA-				
	Structure: Kiln dried hardwood / metal frame, premium grade S-Spring. Cushion: Seat cushion with high density foam, Back with integrated lumbar support. Legs: Tube in stainless steel. WARRANTY: 1 YEARS Godrej Model- Bristol/BP Ergo Model- ES1025				
d)	Sofa 3 Seater	Nos.	8		
e)	Sofa 1 Seater	Nos.	8		
f)	Coffee table	Nos.	8		
	Coffee Table 600D X 1200W Top: Rectangular shaped 25mm Veneer top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY: 1 YEARS Godrej Model- Victoria/BP Ergo Model- ES1026				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
g)	Corner table	Nos.	16		
	Corner Table 600D X 600W Top:Square shaped 25mm Veneer top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Edward/BP Ergo Model- ES1026				
h)	sofa chair	Nos.	8		
	Sofa Chair (size w552xd572xh 700mm): Structure: Kiln dried hardwood / metal frame, premium grade S-Spring. Cushion: Sprincell seat cushion with high density foam, Dacron back with integrated lumbar support. Legs: Polished tube stainless steel. WARRANTY:1YEARS Godrej Model-Sizzel/BP Ergo Model- Es1030				
i)	<u>CPU Trolley-</u>				
	P/S CPU Trolley made of 1-1.2 mm thick CRCA/HR steel, duly powder coated of thickness not less than 40-45 micron of approved shade. Godrej Model- CPU Trolley/BP Ergo Model- Ergo CPU	Nos.	8		
j)	<u>KeyBoard Tray-</u>				
	P/S Keyboard pull out tray made of 0.8 mm thick CRCA steel duly powder coated, of minimum thickness 45 micron, with metallic roller slides(Telscopic channels) on both sides. Godrej Model- KBPT/BP Ergo Model- Ergo KBT	Nos.	8		
5	<u>Free Standing Misc WS (In Laminate Finish)-</u>				
5.Ia)	Bank Table-Size of Size 1500mm x750mm with Return Unit as per Layout. Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Godrej Model- Finness/BP Ergo Model- Ergo Recta	Nos.	1		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
5.Ib)	Travel & Public Record Table-Size of Size 1500mm x750mm with Return & Back Unit as per Layout. Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Godrej Model- Finness/BP Ergo Model- Ergo Recta	Nos.	0		
5.Ic)	Library Table-I Size of Size 900mm x600mm Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Godrej Model- Finness/BP Ergo Model- Ergo Recta	Nos.	3		
5.Id)	Library Table-II,Service Storage & Stationary Table-Size of Size 1500mm x750mm. Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Godrej Model- Finness/BP Ergo Model- Ergo Recta	Nos.	2		
5.Ie)	Dispatch Office Table-1200mm x 600mm + Side Unit Mobile Pedestal: 3 Drawer Mobile pedestal (Metal) with400-450 Width. Height 600-700mm Depth 500-600mm,lockable with keys. Godrej Model- Finness/BP Ergo Model- Ergo Recta	Nos.	1		
i)	<u>CPU Trolley-</u>				
	P/S CPU Trolley made of 1-1.2 mm thick CRCA/HR steel, duly powder coated of thickness not less than 40-45 micron of approved shade. Godrej Model- CPU Trolley/BP Ergo Model- Ergo CPU	Nos.	9		
ii)	<u>Keyboard Tray-</u>				
	P/S Keyboard pull out tray made of 0.8 mm thick CRCA steel duly powder coated, of minimum thickness 45 micron, with metallic roller slides(Telescopic channels) on both sides. Godrej Model- KBPT/BP Ergo Model- Ergo KBT	Nos.	9		
5.II	<u>Staff Chair-</u>				
	Mid Back Chair •Adjustable seat height. •Backrest: Steel carrier, upholstered with moulded polyester mesh. •Armrests: All adjustable armrest with polyurethane (PU) armpads. •Base: Black nylon base. •Castors: Nylon / Fibreglass castors in black color. Heavy-duty twinwheel castors WARRANTY:1YEARS Godrej Model- PCH 5102/BP Ergo Model- ES315				
5.IIc	<u>Mid Back Chair-</u>	Nos.	0		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
6	Conference/Meeting Table-				
	Top:25 mm thick Particle Board (E-1 grade) with postlamination.Edge-banding:2 mm PVC edge-banding Legs:1.5 mm thick epoxy powder coated legs with aluminium extrusions, 725 mm height. WARRANTY:1YEARS Godrej Model- Talk/BP Ergo Model- Ensemble				
a)	Round Shape prelam Discussion Table- Size-1000/1200dia x 727-750mm(H) in single piece without Power Dock. (4 seater) Godrej Model- Talk/BP Ergo Model- Ensemble	Nos.	1		
b)	Boat Shape Veneer Conference Table- Size-3600 x 1600/1800 x 727-750mm(H) in two piece with 2 Power Docks for wire mangement (12/14 Seater) Godrej Model- Talk/BP Ergo Model- Ensemble	Nos.	5		
c)	Boat Shape Veneer Conference Table- Size-3000/3200x 1200 x 727-750mm(H) in single piece with 1 Power Dock for wire mangement. (10 Seater) Godrej Model- Talk/BP Ergo Model- Ensemble Godrej Model- Talk/BP Ergo Model- Ensemble	Nos.	2		
d)	Boat Shape prelam Conference Table- Size-2400 x 1200 x 727-750mm(H) in single piece with 1 Power Dock for wire mangement.(8 Seater) Godrej Model- Talk/BP Ergo Model- Ensemble	Nos.	2		
e)	Rectangular Veneer Conference Table- Size-3600 x 1200 x 727-750mm(H) in two piece with 2 Power Docks for wire mangement.(12 Seater) Godrej Model- Talk/BP Ergo Model- Ensemble	Nos.	2		
f)	Boat Shape Prelam Meeting Table- Size-2000 x 1000/1200 x 727-750mm(H) in single piece with 1 Power Dock for wire mangement. (6 Seater) Godrej Model- Talk/BP Ergo Model- Ensemble	Nos.	10		
g)	Conference Chair	Nos.	0		
	<ul style="list-style-type: none"> •Adjustable seat height. •Backrest: Steel carrier, upholstered with moulded polyester mesh. •Armrests: All adjustable armrest with polyurethane (PU) armpads. •Base: Black nylon base, •Castors: Nylon / Fiberglass castors in black color. Heavy-duty twinwheel castors WARRANTY:1YEARS Godrej Model- PCH5102/BP Ergo Model- ES319				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
7	<u>Storage Cabinets-</u>				
	Top:18 mm. thick Particle Board (E-1 Grade / Green), pre-laminate finishes with 2 mm. PVC edge-banding. Front:16-18 mm. thick Particle Board (E-1 Grade / Green),pre-laminate finishes with 2 mm. PVC edge-banding.(sliding/Hinge shutter). Body/Shelf:18 mm. thick Particle Board (E-1 Grade / Green), pre-laminate finishes with 2 mm. PVC edge-banding. Back: 9 mm th. Prelam particle board (E 1 grade finish). Handles:I-Type (AR) orC-Type (AC) orD-Type (PC) Joint between the prelam boards to be done in KD, minifix & dowell. All fittings have to be Hafele/Hettich/Ebco make. Lev:Adjustable. WARRANTY:1YEARS Godrej Model- HDU/BP Ergo Model- Lamino Cabinets				
a)	600mm(L) x 450mm(D) x 1200-1217mm(H)-	Nos.	74		
b)	750mm(L) x 450mm(D) x 1200-1217mm(H)-	Nos.	14		
c)	900mm(L) x 450mm(D) x 1200-1217mm(H)-	Nos.	91		
8	<u>Low Ht Storage Unit With Top -</u>				
	Top:18 mm. thick Particle Board (E-1 Grade / Green), pre-laminate finishes with 2 mm. PVC edge-banding. Front:16-18 mm. thick Particle Board (E-1 Grade / Green),pre-laminate finishes with 2 mm. PVC edge-banding (Sliding Shutter). Body/Shelf:18 mm. thick Particle Board (E-1 Grade / Green), pre-laminate finishes with 2 mm. PVC edge-banding. Back: 9 mm th. Prelam particle board (E 1 grade finish). Handles:I-Type (AR) orC-Type (AC) orD-Type (PC). Joint between the prelam boards to be done in minifix & dowell. All fittings have to be Hafele/Hettich/Hettich make. Legs:AdjustersTop. WARRANTY:1YEARS Godrej Model- HDU/BP Ergo Model- Lamino Credenza				
a)	750mm(L) x 450mm x 727-760mm(H)-	Nos.	66		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
b)	900mm(L) x 450mm x 727-760mm(H)-	Nos.	61		
c)	1050mm(L) x 450mm x 727-760mm(H)-	Nos.	109		
d)	1200mm(L) x 450mm x 727-760mm(H)-	Nos.	21		
9	<u>COMPACTOR-</u>				
	<p>Providing & Supplying Compactor of approximately 915mm wide, 1980mm height (Ht), 457mm depth. The overall height of the standard module is 1980 mm from the bottom of the under carriage to the top of the module. These modules are fabricated in the factory with knock down construction covered from all the sides. The sheet used is CRCA conforming to IS:513 Grade D with thickness 0.8-1mm for the vertical back, side walls, top cover and horizontal shelves of bodies. Bodies are fixed/movable are bolted to undercarriage made up of 2-3mm thk HR Steel sheet which rolls onto channels/rail of 1.2-2mm thk HR steel & 25mm square bright bar which are embedded to the levelled ground.</p> <p>The sides/shelves shall be made from steel sheets conforming to relevant codes. The construction of the units shall be such that protection against dust by suitable overlapping of sheets and adequate pressing of joint. The allowable dimensional tolerance for the overall size of the body is 2mm. The bodies should be complete knock down type and UDL each shelf should be 40kg . No welding/metal working is allowed on site, Bodies are fixed/movable are bolted to undercarriage is allowed on site. Godrej Model- Optimizer/BP Ergo Model- Ergo Compactor</p>	Nos.	258		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
	<u>Library/Stationary/Service/Public Record-</u>				
10	Top:18 mm. thick pre-laminate particle Board (E-1 Grade),with 2 mm. PVC edge-banding. Front: Back open to keep it accessible from both sides. Body:18 mm. thick pre-laminate particle Board (E-1 Grade / Green), finishes with 2 mm. PVC edge-banding. Shelves: Made of .8 mm duly powder coated with 45 microns having UDL capacity of 60 Kg. Joint between the prelam boards to be done in KD,minifix & dowell. All fittings have to be Hafele/Hettich/Ebco make. Lev:Adjustable. WARRANTY:1YEARS Godrej Model- Book Rack/BP Ergo Model-Booker				
a)	One Side-1800mm(H) x 300mm(D) x 900mm(L)	Nos.	65		
b)	Double Side-1800mm(H) x 590mm(D) x 900mm(L)	Nos.	30		
	<u>Library Reading Round Table-</u>				
11a	Reading Table 1200dia Top:25 mm. thick Prelaminated Particle Board (E-1 grade / Green) top. Edge-banding:2 mm PVC edge-banding. Leg:63mm. dia. epoxy powder coated steel tube leg. Epoxy powder coated steel base. Height: 725-740mm. WARRANTY:1YEARS Godrej Model- Versatila/BP Ergo Model- Ensemble	Nos.	6		
b)	Reading Chair	Nos.	0		
	Reading chair : Visitor, Fixed Arms, Backrest: Upholstered with polyester mesh fabric. Seat: Pressed and molded plywood, upholstered with molded high density foam and jacketed with fabric Armrests: Polypropylene (PP) armpads. Base: Bended pipe steel with chrome plated base. WARRANTY:1YEARS Godrej Model- PCH5102/BP Ergo Model- Es628				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
	<u>LUNCH ROOM TABLE-</u>				
12	P/S Lunch Room Table made up of 25 mm Prelam partical board (E 1 grade) with SS/CRCA Steel Powder Coated Understructure Model- Insight/BP Ergo Model- Quarto Godrej				
a)	Round/Square Shape-900mm (Lunch Room)	Nos.	30		
b)	Rectangular Shape-1500x 750/900mm	Nos.	11		
c)	Rectangular Shape-1800mm x 750/900mm	Nos.	8		
d)	Round Shape-1050/1100mm Dia (VIP Dining Area) Godrej Model- Headan/BP Ergo Model- Quarto	Nos.	20		
e)	VIP Dining Chair: Seat & BACK with PU FOAM and leatherite.Leg with SS finish with rubber cushion. Armrest:Soft PU pad. WARRANTY:1YEARS Godrej Model- Carissa/BP Ergo Model- Quarto	Nos.	80		
f)	Café Chair: Made up of single piece PP moulded seat & back.Legs are made up of SS. Godrej Model- MPC4/BP Ergo Model- Quarto	Nos.	208		
13	<u>Periodicals-</u>	Nos.	5		
14	Top:25 mm. thick pre-laminate Particle Board (E-1 Grade / Green), finishes with 2 mm. PVC edge-banding. Front:16-18 mm. thickpre-laminate Particle Board (E-1 Grade / Green), finishes with 2 mm. PVC edge-banding. Body: 0.7 mm. powder coated steel; 5-shelf cabinet. Shelves:1.0 mm. powder coated steel, Max. load 45 Kgs./shelf. Joint between the prelam boards to be done in minifix & dowell. All fittings have to be Hafele/Hettich make. Legs:AdjustersTop WARRANTY: 1 YEARS Godrej Model- Periodical Display Rack/BP Ergo Model- Opus	Nos.	2		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
	Union office				
15	Structure: Kiln dried hardwood/Metallic frame. Cushion: seat cushion with high density foam. Legs:stainless steeltube legs. WARRANTY:1YEARS. Godrej Model- Jenirio/BP Ergo Model- Es1013				
a)	Sofa 3 Seater	Nos.	0		
b)	Sofa 2 Seater	Nos.	0		
	MISC Sofa/Center/Corner Table-				
16	Sofa Chair Godrej Model- Sizzel/BP Ergo Model- Es1002	Nos.	2		
a)	Coffee Table-				
	Corner Table 600D X 1200W Top:Square shaped 10 mm thick tampered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY: 1 YEARS Godrej Model- Victoria/BP Ergo Model- Es1021	Nos.	0		
b)	Corner Table	Nos.	12		
	Coffee Table 500-600mm dia circular table Top:10 mm thick tampered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Edward/BP Ergo Model- Es1021				
	ATTENDANT-				
16	2 SeaterSofa	Nos.	21		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
	Providing and Fixing the Attendant chair made of Epoxy powder coated Seat and back shell made up of high quality steel makes it strong and durable. • Leg and Armrests are made of cold rolled steel and are chrome plated for long life. Chrome element in arms adds beauty to the aesthetics. Armrests and legs are anti rust and anti scratch. • Cross beam is structural M.S. powder coated Godrej Model- Perch/BP Ergo Model- ES909				
17	SECURITY OFFICE (Front &back block entry)				
a)	Chair High Back	Nos.	0		
	Headrest: Polypropylene carrier, upholstered with molded high density foam and jacketed with special fabric. Backrest: Polypropylene carrier, upholstered with molded polyester mesh fabric. Seat: Pressed and molded plywood with polypropylene back covered, upholstered with molded high density foam and jacketed with fabric. Armrests: All adjustable armrest up to 60 mm with polyurethane (PU) armpads. Base: Black painted nylon plastic base. Castors: Nylon plastic castors in black color. Heavy-duty twinwheel castors able to stand up to 25 kgs per wheel. Posture Control: 360 degree swivel, synchronized knee-tilt with 5 positions locking. Gas-lift: Allows 7 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- PCH9R01/BP Ergo Model- ES503				
	SOFA-				
	Structure: Kiln dried hardwood frame, premium grade S-Spring. Cushion: Sprincell seat cushion with high density foam, Dacron back with integrated lumbar support.In Leatherite finish Legs: Polished tube stainless steel. WARRANTY:1YEARS Godrej Model- Jenirio/BP Ergo Model- ES1022				
d)	Sofa 3 Seater	Nos.	0		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
e)	Sofa 1 Seater	Nos.	0		
f)	Coffee table	Nos.	0		
	Coffee Table 1200X600mm rectangular table Top: 10 mm thick tempered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY: 1YEARS Godrej Model- Victoria/BP Ergo Model- ES1021 Corner Glass Table				
g)	Corner table	Nos.	4		
	Coffee Table 500-600mm dia circular table Top: 10 mm thick tempered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY: 1YEARS Godrej Model- Edward/BP Ergo Model- ES1021 Corner Glass Table				
h)	sofa chair	Nos.	14		
	Sofa Chair (size w552xd572xh 700mm): Structure: Kiln dried hardwood/metal frame, premium grade S-Spring. Cushion: Sprincell seat cushion with high density foam, Dacron back with integrated lumbar support. Legs: Polished tube stainless steel. WARRANTY: 1YEARS Godrej Model- Sizzel/BP Ergo Model- ES1013				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
17	WAITING LOUNGE(Front &back block entry)				
a)	SOFA-				
	Structure: Metallic frame. Legs: stainless steel/Chrome plated legs WARRANTY:1YEARS Godrej Model- Jenirio/BP Ergo Model- ES909				
b)	Sofa 3 Seater	Nos.	0		
c)	Sofa 2 Seater	Nos.	0		
d)	Coffee table	Nos.	0		
	Coffee Table 900 dia circular table Top:10 mm thick tampered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Globe/BP Ergo Model- ES1021 Corner Glass Table				
e)	Coffee table	Nos.	0		
	Coffee Table 750 dia circular table Top:10 mm thick tampered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Globe/BP Ergo Model- ES1021 Corner Glass Table				

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
f)	Corner table	Nos.	6		
	Coffee Table 450mm dia circular table Top:10 mm thick tempered glass top Legs: Chrome legs with top supporting understructure. Glides Chrome matching the legs. WARRANTY:1YEARS Godrej Model- Globe/BP Ergo Model- ES1021 Corner Glass Table				
18	<u>RECEPTION (Front block entry)</u>				
a)	Chair Mid Back (Visitor Chair)	Nos.	2		
	Backrest & Lumbar support: can be adjusted to support user's ergonomic and preference. Tension knob Tilt lock control adjustment: allows user to lock backrest at a-predetermined positions within the full range of movement by pushing lever backward. Seat : Pressed and molded plywood with nylon plastic back covered, upholstered with molded high density foam and jacketed with vinyl.Ergonomic seat height adjustment accommodates individual physical requirement. Operated by lifting lever upwards. Armrest:All adjustable armrest up to 60-80 mm., and 8 locking positions with polyurethane (PU) armpads. Pivot adjustable. Base: Polished aluminum base. Castors:Nylon plastic castors in black color. Heavy-duty twinwheel castors. Posture Control: 360 degree swivel, dual-action synchro-tilt with 5 positions locking. Gas-lift: Allows 10 cm. of height adjustment. WARRANTY:1YEARS Godrej Model- PCH5102/BP Ergo Model- ES502				
LIST 2 TOTAL					
Suggested Brand : Godrej, BP Ergo					

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
CUSTOMIZED FURNITURE					
1	Back drop of reception size 4000(W)X4500(HI), support. System for the stone to be in 75X75X6MM tube projected member of stainless steel studs to hold the tiger onyx stone 600X600MM with studs. All sides to be enclosed 75X75X6MM MS tube clad with BWR black board with 4mm thick veneer polish with Melamine polish.	Nos.	1.00		
2	3000X4.5X750mm wall hung storage unit back of reception in 19mm BWR board clad with 4mm veneer with 2mm thick hardwood lipping all complete with hardware like hinges & handle of approved make (hettich)	Nos.	1.00		
3	Reception counter 400x900x1100mm with a frame of BWR board 38mm. Upper counter 400mm wide lower work counter 750 high and 950mm wide. Work counter clad with 400 veneer PU finish, having complete thickness 42mm with teakwood edge moulding front fascia and top counter upto height of 1100mm shall be clad with ONYX stone as approved projecting out by 100mm, inner cladding of fascia to be satvario/black markino. All complete with two pedestal unit size (500x450x600) on castors clad with 4mm veneer over 19mm board with twomm thick hard wood lipping in melamine polish.	Nos.	1.00		
4	Reception counter 2000x900x1100mm with a frame of BWR board 38mm upper counter 300mm wide lower work counter 750 high and 950mm wide. Work counter clad with 400 veneer PU finish, having complete thickness 42mm with teakwood edge moulding front fascia and top counter upto height of 1100mm shall be clad with ONYX stone as approved projecting out by 100mm, inner cladding of fascia to be satvario/black markino. All complete with one pedestal unit size (500x450x600) on castors clad with 4mm veneer over 19mm board with twomm thick hard wood lipping in melamine polish.	Nos.	2.00		
5	CMD desk (size) 4500x1200mm with side unit 1000x500mm in veneer finish.Front modesty panel to be upholsted with leatherite as per drawing	Nos.	1.00		
6	CMD back storage unit- 1500x450x750mm wall hung storage unit in 19mm BWR board clad with 4mm veneer with 2mm thick hardwood lipping in PU finish all complete with hardware like hinges & handle of approved make (Hettich,Geze or Dorma) as per drawing	Nos.	2.00		

S. No. (1)	Description of Items (2)	Unit (3)	Qty. (4)	Rate (5)	Amount (6)
7	CMD-wooden console (2000x450x600mm) in 19mm BWR board cladded with 4mm veneer with 2mm thick hardwood lipping in PU finish all complete with hardware like hinges,legs and handle of approved make(Hettich,Geze or Dorma)as per drawing	Nos.	1.00		
8	DIRECTORS DESK (3500x1200x750) with side unit(900x600mm) in 19mm BWR board cladded with 4mm veneer with 2mm thick hardwood lipping in PU finish all complete with hardware like hinges,legs & handle of approved make(Hettich,Geze or Dorma) as per drawing.	Nos.	6.00		
9	DIRECTORS-back storage unit(1200x450x750) in 19mm BWR board cladded with 4mm veneer with 2mm thick hardwood lipping in PU finish all complete with hardware like hinges & handle of approved make (Hettich, Geze or Dorma) as per drawing.	Nos.	8.00		
10	VISITING & CVO DIRECTOR- back storage unit(3000x450x750) in 19mm BWR board cladded with 4mm veneer with 2mm thick hardwood lipping in PU finish all complete with hardware like hinges & handle of approved make(Hettich,Geze or Dorma) as per drawing.	Nos.	2.00		
CUSTOMIZED FURNITURE TOTAL					

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-11 COST OF HVAC WORK

SUMMARY

S. No.	Description	<u>TOTAL QUOTED AMOUNT</u> <u>(In Rs.)</u>
1	SUB-HEAD 'A' - MACHINERY	
2	SUB-HEAD 'B' - DUCTING & GRILLS	
3	SUB-HEAD 'C' - INSULATION	
4	SUB-HEAD 'D' - VENTILATION	
5	SUB HEAD 'E' - ELECTRICAL	
TOTAL COST OF PART-11 COST OF HVAC WORK		

NAME OF WORK : "RENOVATION WORK OF BHEL HOUSE BUILDING, SIRI FORT, NEW DELHI-110049"

PART-11 PRICE BID FOR HVAC WORK

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
SUB-HEAD 'A' - MACHINERY					
OUTDOOR UNIT					
1	Supplying, Installation, testing & commissioning of inverter based Variable refrigerant volume/flow modular type air-conditioning unit suitable for cooling and heating by using Scroll/Dual twin rotary compressors complete with outdoor units with centralised controller, with fittings, powder coated MS stand etc. as per quantity given below including full charging of R-410A refrigerant gas complete as per specifications.				
1.1	Outdoor units of 12 HP Nominal Capacity	Nos.	68		
2	Indoor Units (Nominal Capacity)				
2.1	Supply, Assembly, Erection, Testing and Commissioning of Ceiling Concealed ductable with high static type Unit of 8.0 TR Nominal capacity with fittings, flexible canvas connection, required cable connect indoor unit to socket etc. complete as required.	Nos	11		
2.2	Supply, Assembly, Erection, Testing and Commissioning of Ceiling Concealed ductable with high static type Unit of 6.5TR Nominal capacity with fittings, flexible canvas connection, required cable connect indoor unit to socket etc. complete as required.	No	4		
2.3	Supply, Assembly, Erection, Testing and Commissioning of Ceiling Concealed ductable with high static type Unit of 4.0 TR Nominal capacity with fittings, flexible canvas connection, required cable connect indoor unit to socket etc. complete as required.	Nos	22		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
2.4	Supply, Assembly, Erection, Testing and Commissioning of Ceiling Concealed ductable with high static type Unit of 2.0 TR Nominal capacity with fittings, flexible canvas connection, required cable connect indoor unit to socket etc. complete as required.	No	1		
2.5	Supply, Assembly, Erection, Testing and Commissioning of Ceiling Concealed ductable with medium static type Unit of 1.0 TR Nominal capacity with fittings, flexible canvas connection, required cable connect indoor unit to socket etc. complete as required.	No	1		
2.6	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit Compact type of 1.0 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	6		
2.7	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit Compact type of 1.2 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	10		
2.8	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 4.0 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	1		
2.9	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 3.0 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	5		
2.10	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 2.5 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	20		
2.11	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 2.2 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	18		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
2.12	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 2.0 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	72		
2.13	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 1.5 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	63		
2.14	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 1.2 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	49		
2.15	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 1.0 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	41		
2.16	Supply, Assembly, Erection, Testing and Commissioning of 4 way Cassette Unit of 0.8 TR Nominal capacity with fittings, drain pump, Panel, required cable connect indoor unit to socket etc. complete as required.	Nos	3		
2.17	Supply, Assembly, Erection, Testing and Commissioning of Wall Mounted Type Unit of 0.62 TR Nominal capacity with fittings, required cable connect indoor unit to socket etc. complete as required.	Nos	5		
2.18	Supply, Assembly, Erection, Testing and Commissioning of Wall Mounted Type Unit of 0.8 TR Nominal capacity with fittings, required cable connect indoor unit to socket etc. complete as required.	Nos	6		
2.19	Supply, Assembly, Erection, Testing and Commissioning of Wall Mounted Type Unit of 1.0 TR Nominal capacity with fittings, required cable connect indoor unit to socket etc. complete as required.	Nos	2		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
2.20	Supply, Assembly, Erection, Testing and Commissioning of Wall Mounted Type Unit of 1.2 TR Nominal capacity with fittings, required cable connect indoor unit to socket etc. complete as required.	Nos	1		
2.21	Supply, Assembly, Erection, Testing and Commissioning of Wall Mounted Type Unit of 2.0 TR Nominal capacity with fittings, required cable connect indoor unit to socket etc. complete as required.	Nos	4		
3	Supply, Assembly, Erection, Testing and Commissioning of Imported fittings Y-joints and headers etc	Nos	315		
4	Supply, Assembly, Erection, Testing and Commissioning of Corded remote controls with control wiring complete with all respect.	Nos	20		
5	Supply, Assembly, Erection, Testing and Commissioning of Corded remote	Nos	180		
Refrigerant Piping					
6	Supplying & Installation of interconnecting following sizes of refrigerant copper pipe work of following outer diameter, insulated with 19/13 mm thick closed cell electrometric nitrile rubber tubular insulation between each set of indoor & outdoor units with outer mechanical protection of aluminium cladding for all exposed pipes as per specification all piping inside the room shall be properly fixed/supported with suitable size of clamp/ M.S. hanger and all external piping shall run in M.S. painted cable tray etc. as required.				
6.1	41.3 mm dia with 19mm thick nitrile rubber insulation	Mtr	720		
6.2	34.9 mm dia with 19mm thick nitrile rubber insulation	Mtr	600		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
6.3	28.6 mm dia with 19mm thick nitrile rubber insulation	Mtr	750		
6.4	22.2 mm dia with 19mm thick nitrile rubber insulation	Mtr	1050		
6.5	19.1 mm dia with 13mm thick nitrile rubber insulation	Mtr	700		
6.6	15.9 mm dia with 13mm thick nitrile rubber insulation	Mtr	1650		
6.7	12.7 mm dia with 13mm thick nitrile rubber insulation	Mtr	1290		
6.8	9.5 mm dia with 13mm thick nitrile rubber insulation	Mtr	2025		
6.9	6.4 mm dia with 13mm thick nitrile rubber insulation	Mtr	625		
7	Centralized controller	Nos	1		
8	Supply, installation, testing & commissioning of precision air conditioning unit, 35 KW nominal capacity {at return air temperature of 20 (+1) deg C & 50% (-+5%) RH and Outdoor Ambient temperature of 43 (+1) Deg C} floor mounted, bottom discharge, air cooled DX type condensor type, Scroll Compressors, Evaporator DX Cooling Coil, Microprocessor controllers, Humidifiers, Heaters, suitable for operation on 415 Volts, 50 Hz, 3 Phase, 4 Wire AC supply, as technical specifications	Nos	1		
SUB TOTAL FOR SUB-HEAD 'A'					

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
SUB-HEAD 'B' - DUCTING & GRILLS					
1	Supply, fabrication, installation, balancing and commissioning Pre-Insulated Fiberglass wool Duct having 25mm thickness with both side factory laminated aluminum foil, outer facing foil is having - Reinforced aluminum. Kraft and glass veil and inner facing foil - Aluminum, Kraft and glass veil.	Sqm	3400		
2	Supply and Installation of 150mm dia braided flexible connecting hose pie from TFA duct to cassette units with suitable clamp on either side.	Mtr.	200		
3	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc, as per specifications and drawings of the following size.	Sqm	12		
4	Supply, installation and testing of collar dampers of MS construction, to be provided within supply air collars complete with key operation facility for manual control of air volume and air balancing as per approved drawings.	Sqm	4		
5	Supply, installation, testing & commissioning of pre insulated flexible duct duly insulated with 25mm thick glass wool of 24 Kg/Cum density of following sizes duly supported at regular interval as per site requirement etc. complete as required as per specifications.				
5.1	100 mm dia.	Rmt	850		
6	Supply, installation, testing and commissioning of powder coated extruded aluminum linear slot diffuser complete with HIT-MISS damper as per drawings.				
6.1	2 Slot	Rmt	55		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
7	Supply, installation, testing and commissioning of powder coated extruded aluminum linear slot diffuser complete without HIT-MISS damper as per drawings.				
7.1	2 Slot	Rmt	15		
8	Supply, fixing and commissioning of powder coated extruded aluminum diffusers complete with black anodized extruded aluminum VCD, nuts, bolts, screws etc. as per approved drawings and specifications.				
8.1	Supply air diffusers with volume control damper.	Sqm	20		
8.2	Return air diffusers without volume control damper	Sqm	20		
9	Supply, fixing and commissioning of powder coated extruded aluminum return/exhaust air grilles without VCD complete with nuts, bolts, screws etc. as per approved drawings and specifications.	Sqm	30		
10	Supply, installation, testing and commissioning of high quality plastic (UL 94 V1) circular manual volume flow controller to control fresh air and exhaust air as per the following CFM complete as required.				
10.1	10 CFM to 100 CFM	Nos	300		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
	Drain Piping				
11	Providing & fixing of PVC Pipe complete with fittings, supports as per specifications.with 9mm thickness of closed cell nitrile rubber for insulation of drain piping as required				
11.1	50 mm dia	Rmt	250		
11.2	40 mm dia	Rmt	500		
11.3	32 mm dia	Rmt	1000		
11.4	25 mm dia	Rmt	300		
12	Providing and fixing of control cable between indoor & outdoor units 3 Core x 1.5 sqmm. shielded cable in Heavy duty PVC conduit (20mm dia.) complete in all respect & as required.	Rmt	5000		
SUB TOTAL FOR SUB-HEAD 'B'					
SUB-HEAD 'C' - INSULATION					
1	Supply and fixing of Pre-Insulated Fiberglass wool Duct for acoustic insulation is having 25mm thickness with one side factory laminated aluminum foil, outer facing foil is having - Reinforced aluminum, Kraft and glass veil and inner facing - Black glass textile.	Sqm	150		
SUB TOTAL FOR SUB-HEAD 'C'					

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
SUB-HEAD 'D' - VENTILATION					
1	Treated Fresh air unit				
	Supply, Installation, testing and Commissioning of Treated fresh air unit of ductable indoor & outdoor condensing unit Dx type, suitable for operation on 415 ± 10% voltage, 50 Hz A/c 3 phase 4 wire system of following capacities complete with refrigerant piping, wiring, drain piping, powder coated MS stand for outdoor unit and fixing hardware for indoor unit, canvass, etc.				
1.1	6000 cfm 6 row coil with 65mm static pressure connected to 4 Nos. 7.5 TR Condensing Units	No.	1		
1.2	10000 cfm 6 row coil with 100 mm static pressure connected to 8 Nos. 7.5 TR Condensing Units	No.	1		
2.0	Supply, Installation, Testing and Commissioning of Heat Reclaim Ventilation units along with corded remote controller of following capacities:-				
2.1	2000 CMH	No.	1		
2.2	1500 CMH	Nos.	1		
2.3	1000 CMH	Nos.	1		
2.4	800 CMH	Nos.	1		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
2.5	650 CMH	Nos.	1		
2.6	500 CMH	Nos.	1		
3	Axial Flow Fan unit				
	Supply, Installation, testing and commissioning of Fresh air / Exhaust Axial flow fan of following capacity for pressurization and smoke extraction system with powder coated M.S. casing and aluminium alloy impellers with high efficiency aero-foil sections, blades, the impeller directly driven by TEFC induction motor (efficiency 1) suitable for 3 Phase 50 Hz 415 V \pm 10 %,1400 RPM of class 'F' insulation etc. complete as required and as per specifications . TP isolator with MS enclosure box should be Provided.The fan to be selected at 30mm WG static pressure.				
3.1	17750 CFM (Staircase pressurization)	No.	1		
3.2	8500 CFM (Corridor Smoke Exhaust/Supply)	Nos.	4		
3.3	5300 CFM (Liftwell pressurization)	Nos.	2		
3.4	3600 CFM (Corridor Smoke Exhaust/Supply)	Nos.	2		
3.5	3000 CFM (Lift lobby pressurization)	No.	1		
3.6	2500 CFM (Pantry Exhaust)	No.	1		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
3.7	2550 CFM (Corridor Smoke Exhaust/Supply)	Nos.	4		
3.8	2100 CFM (Corridor Smoke Exhaust/Supply)	Nos.	4		
4	<u>Inline Fan</u>				
	Supplying, installing, testing and commissioning of inline fan for toilet exhaust with centrifugal blower and motor encased in sheet metal casing. The motor shall be suitable for 220 voltage, 1 phase, 50 cycle AC cycle. The price shall include fan speed regulator. (20 mm static)				
4.1	1800 CFM	No.	1		
4.2	400 CFM	Nos.	3		
4.3	200 CFM	Nos.	8		
SUB TOTAL FOR SUB-HEAD 'D'					

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
SUB HEAD 'E' - ELECTRICAL					
1	HVAC Panel- 3 (TERRACE G+2)				
	Supply, installation, testing and commissioning of dust, damp and vermin proof cubicle free floor, indoor type factory built sheet steel enclosed modular bolted construction extendable panel, suitable for operation on 415 ±10% volts, 50 Hz AC 3 phase 4 wire supply system fabricated out of suitable sized square tubular section and covered with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having suitable Amps. capacity extensible type TPN Aluminium bus bars of high conductivity, DMC/ SMC bus bar supports, Fabrication shall be done in transportable sections, entire panel shall have a common copper earth bus bar to switch gears with required size of Alum. bus bars and inter-connection with solid copper conductor wires / aluminium strips, neutral links,				
	including control wiring with 1.5sqmm. & 2.5sqmm. PVC insulated FRLS copper conductor S/C cable for voltage & current respectively, cable alleys, cable gland plates in two half, etc. necessary metering protections & indications and mounted with the following switch gears as per drawing and technical specifications etc. complete as required.				
	Incoming:				
a)	1 No.- 800Amp. 4P Air Circuit Breaker Horizontal Manual drawout type of fault breaking capacity 50kA (Ics=Icu =Icw for 1 sec. at 415V), fitted with interlocked door, automatic safety shutters, 6NO + 6 NC auxilliary contacts, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, conforming to IS-13947-2 1993 as amended up-to-date complete with following accessories				
b)	Independent Electrical / manual spring closing mechanism - 1 set				

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
c)	Microprocessor release (EMI & EMC certified) for over current, earth fault & short circuit protection - 1 set.				
d)	3 Nos. Phase indication LED lamps with 2Amp back up MCB, breaker 'ON/OFF' indicating light with 2A MCB, test terminal block set, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.				
e)	1 set - multifunction digital meter to read V, Amp, KW, KWH with 3 nos. resin cast CT's of 800/5A class 1.0 accuracy and 15 VA burden.				
f)	Shunt trip coil 220V A.C.				
	Bus Bar :				
	TPN aluminium extensible type main bus bars of minimum of 1000 Amp capacity and auxiliary bus bar of suitable capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bars supports at required intervals complete for cross section, size supports & their spacing etc.				
	Outgoings:				
ii)	8 Nos. - 125 Amp. 50kA 4 pole , MCCB with O/L, S/C & built-in earth fault protection with following accessories for each MCCB's :-(7 For outdoor unit + Spare)				
	HVAC PANEL AS ABOVE	Set	1		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
2	HVAC Panel-1&2 (TERRACE G+5)				
	Supply, installation, testing and commissioning of dust, damp and vermin proof cubicle free floor, outdoor type (IP-55 Protection) factory built sheet steel enclosed modular bolted construction extendable panel, suitable for operation on 415 ±10% volts, 50 Hz AC 3 phase 4 wire supply system fabricated out of suitable sized square tubular section and covered with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having suitable Amps. capacity extensible type TPN Aluminium bus bars of high conductivity, DMC/ SMC bus bar supports, Fabrication shall be done in transportable sections, entire panel shall have a common copper earth bus bar to switch gears with required size of Alum. bus bars and inter-connection with solid copper conductor wires / aluminium strips, neutral links,				
	including control wiring with 1.5sqmm. & 2.5sqmm. PVC insulated FRLS copper conductor S/C cable for voltage & current respectively, cable alleys, cable gland plates in two half, etc. necessary metering protections & indications and mounted with the following switch gears as per drawing and technical specifications etc. complete as required.				
	Incoming:				
a)	1 No.- 630Amp. 4P MCCB of fault breaking capacity 50kA (Ics=Icu =Icw for 1 sec. at 415V),fitted with interlocked door, automatic safety shutters, 6NO + 6 NC auxilliary contacts, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, conforming to IS-13947-2 1993 as amended up-to-date complete with following accessories				
d)	3 Nos. Phase indication LED lamps with 2Amp back up MCB, breaker 'ON/OFF' indicating light with 2A MCB, test terminal block set, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.				
e)	1 set - multifunction digital meter to read V, Amp, KW, KWH with 3 nos. resin cast CT's of 600/5A class 1.0 accuracy and 15 VA burden.				
f)	Shunt trip coil 220V A.C.				
	Bus Bar :				

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
	TPN aluminium extensible type main bus bars of minimum of 800 Amp capacity and auxiliary bus bar of suitable capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bars supports at required intervals complete for cross section, size supports & their spacing etc.				
	Outgoings:				
ii)	5 Nos. - 125 Amp. 50 kA 4 pole , MCCB with O/L, S/C & built-in earth fault protection with following accessories for each MCCB's :-(6 For outdoor unit + Spare)				
	HVAC PANEL AS ABOVE	Set	2		
3	Ventilation panel-1 (Terrace G+5)				
	Supplying, installation, testing and commissioning of dust, damp and vermin proof free floor/wall mounted, outdoor type (IP-55 Protection) standing factory built sheet steel enclosed modular construction extendable panel, suitable for operation on 415 ±10% volts, 50 Hz AC 3 phase 4 wire system fabricated out of suitable sized square tubular section and covered with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, complete with Aluminium bus bars, inter-connection with copper conductor wires / aluminium strips, neutral links, earth bus etc. necessary metering protections & indications and mounted with the following as per drawing and technical specifications attached etc. complete as required.				
	including control wiring with 1.5sqmm. & 2.5sqmm. PVC insulated FRLS copper conductor S/C cable for voltage & current respectively, cable alleys, cable gland plates in two half, etc. necessary metering protections & indications and mounted with the following switch gears as per drawing and technical specifications etc. complete as required. (Each starter should have remote control and interlocking facilities including auto manual switch, NO/NC contacts for control).				
	Incoming:				

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
	4 Pole MCCB 100 Amp (Ics=I cu) 25kA, with phase spreader links with solid isolable neutral link - 1 set				
	1 set - intelligent multifunction digital meter to read V, Amp, KW, KWH with 3 nos. resin cast CT's of 100/5A class 1.0 accuracy and 15 VA burden.				
	3 Nos. Phase indication LED lamps with 2Amp back up MCB, breaker ON indicating light with 2A MCB as required.				
	Outgoings:				
i)	20 Amp DP MCB 'C' - 4 Nos.				
ii)	20 Amp TP MCB 'C' - 12 Nos.				
iii)	40 Amp TP MCB 'C' - 8 Nos.				
iv)	Fully automatic DOL starter suitable for incomer of 20 amp. TP MCB 'C' for operating 0.75 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 2 sets.				
v)	Fully automatic DOL starter suitable for incomer of 20 amp. TP MCB 'C' for operating 1.50 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 4 sets.				
vi)	Fully automatic DOL starter suitable for incomer of 20 amp. TP MCB 'C' for operating 2.2 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 6 sets.				

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
vii)	Fully automatic DOL starter suitable for incomer of 40 amp. TP MCB 'C' for operating 3.7 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 2 sets.				
viii)	Fully automatic DOL starter suitable for incomer of 40 amp. TP MCB 'C' for operating 4 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 6 sets.				
	PANEL AS ABOVE	Set	1		
4	Ventilation panel-2 (Terrace G+2)				
	Supplying, installation, testing and commissioning of dust, damp and vermin proof free floor/wall mounted, indoor type standing factory built sheet steel enclosed modular construction extendable panel, suitable for operation on 415 ±10% volts, 50 Hz AC 3 phase 4 wire system fabricated out of suitable sized square tubular section and covered with CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, complete with Aluminium bus bars, inter-connection with copper conductor wires / aluminium strips, neutral links, earth bus etc. necessary metering protections & indications and mounted with the following as per drawing and technical specifications attached etc. complete as required.				

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
	including control wiring with 1.5sqmm. & 2.5sqmm. PVC insulated FRLS copper conductor S/C cable for voltage & current respectively, cable alleys, cable gland plates in two half, etc. necessary metering protections & indications and mounted with the following switch gears as per drawing and technical specifications etc. complete as required. (Each starter should have remote control and interlocking facilities including auto manual switch, NO/NC contacts for control).				
	Incoming:				
	4 Pole MCCB 63 Amp 25kA, with phase spreader links with solid isolable neutral link - 1 set				
	1 set - intelligent multifunction digital meter to read V, Amp, KW, KWH with 3 nos. resin cast CT's of 60/5A class 1.0 accuracy and 15 VA burden.				
	3 Nos. Phase indication LED lamps with 2Amp back up MCB, breaker ON indicating light with 2A MCB as required.				
	Outgoings:				
i)	20 Amp DP MCB 'C' - 10 Nos.				
ii)	20 Amp TP MCB 'C' - 11 Nos.				
iii)	40 Amp TP MCB 'C' - 3 Nos.				
iv)	Fully automatic DOL starter suitable for incomer of 20 amp. TP MCB 'C' for operating 0.75 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 1 sets.				
v)	Fully automatic DOL starter suitable for incomer of 20 amp. TP MCB 'C' for operating 1.50 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 9 sets.				

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
vi)	Fully automatic DOL starter suitable for incomer of 20 amp. TP MCB 'C' for operating 2.2 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 1 sets.				
vii)	Fully automatic DOL starter suitable for incomer of 40 amp. TP MCB 'C' for operating 3.7 kw motors/fan capacity, complete with contactors, overload protection relay, current sensing type single phase preventor, ON/OFF indications, push buttons, auto/ manual/ off selector switch, and all other accessories with suitable rating PVC insulated FRLS single core copper conductor cable etc. complete as required. - 3 sets.				
	PANEL AS ABOVE	Set	1		
5	Providing and fixing 6 SWG dia GI wire on surface or in recess for loop earthing alongwith the existing cable as required.	Metre	400		
6	Earthing with 25 x 5 mm G.I. earth strip on surface or in recess alongwith existing cable complete as required.	Metre	100		
7	Supply, laying, testing and commissioning of following sizes of XLPE insulated PVC sheathed armoured aluminium conductor cable of 1.1 KV grade on existing cable tray / surface including clamps, ties etc. as required.				
7.1	3.5 Core 70 Sqmm.	Metre	810		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
7.2	3 Core 6 Sqmm.	Metre	910		
7.3	3 Core 4 Sqmm.	Metre	10		
8	Supplying and making indoor end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
8.1	3.5 Core 70 Sqmm.	Sets	34		
8.2	3 Core 6 Sqmm.	Sets	40		
8.3	3 Core 10 Sqmm.	Sets	2		
9	Supply, laying testing and commissioning of following sizes of High performance silicon insulated Fire survival Copper conductor cables as per BS6387 CWZ LPCB tested on existing cable tray / surface including clamps, ties etc. as required.				
9.1	3 Core 6 Sqmm.	Metre	1950		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
10	Supplying and making end termination with brass compression glands of following sizes of 1.1 KV grade multicore copper conductor XLPE insulated and PVC sheathed cable i/c copper lugs etc. complete as required.				
10.1	3 Core 6 Sqmm.	Sets	72		
11	Supplying and installing following size of perforated pre-painted M.S. cable trays bends with perforation not more than 17.5%, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required				
11.1	100 mm. Width x 50mm. Depth x 1.6mm. Thickness.	Metre	150		
11.2	150 mm. Width x 50mm. Depth x 1.6mm. Thickness.	Metre	200		
12	Providing & fixing of control wiring/cablings with following sizes of copper conductor armoured cable directly on surface of wall/ existing channel i/c making connection etc. as required.				
12.1	2 x 1.5 sq.mm	Metre	150		
12.2	2 x 2.5 sq.mm	Metre	530		

Sl. No.	Description of work	Unit	Quantity	Rate	Amount (Rs)
13	Dismantling of Central AC Plant (Water Chillers-4 nos., Electrical Panel-1 Nos., Chiller pump sets- 3 Nos., Condenser pump sets -3 nos., Cooling Towers-2 nos., AHUs-85 nos., FCUs-8nos., Pan Humidifiers-23 nos., Fresh Air fans-8 nos complete piping vertical in shafts and horizontal at roof top, Ducting, Accessories etc) complete.	LOT	1		
14	Buy-back cost for Central AC Plant (Water Chillers-4 nos., Electrical Panel-1 Nos., Chiller pump sets- 3 Nos., Condenser pump sets -3 nos., Cooling Towers-2 nos., AHUs-85 nos., FCUs-8nos., Pan Humidifiers-23 nos., Fresh Air fans-8 nos complete piping vertical in shafts and horizontal at roof top, Ducting, Accessories etc). (Negative values shall b quoted in the rate and amount column and shall be accounted in the total cost)	LOT	1		
SUB TOTAL FOR SUB-HEAD 'E'					