



**BHARAT HEAVY ELECTRICALS LIMITED**  
**RAMACHANDRAPURAM::HYDERABAD::32**  
**FACTORY CIVIL ENGINEERING DEPARTMENT**

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-15/2012-13, Dt: 14.08.2012

PRICE BID

Item no.: 3

**Name of work: Modernisation of Ground Floor, Admn. Bldg. Sub contract area, PR & IR interior works, Civil, Electrical, communication, IT networking and Fire Alarm system.**

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
<b>Part A - Civil Works.</b>					
1	Dismantling the existing wooden / aluminum partitions / half height partitions if required into small units including removing doors and glass panes and stacking in stores, removing the old furniture, almirahs/records and any other items lying in the floor including transportation, loading & unloading, stacking in stores within 2 Kms lead etc. complete as directed by Engineer-in-charge.	275.00	Sq. m.	75.00	20,625.00
2	Dismantling of old cement mortar plastering and disposing off upto a lead of 2 Kms. lead, of walls and ceiling including cost of scaffolding, labour etc. complete as directed by Engineer-in-charge.	10.00	Sq. m.	8.20	82.00
3	Dismantling and disposing off upto 2 Kms lead of reinforced cement concrete work such as slabs, floors, beams, columns etc. using pavement breaker, chipping hammer or other suitable tools etc. complete as directed by Engineer-in-charge. (Compressor Air pavement breaker will be supplied on hire basis).	1.00	Cu. m.	582.68	582.68
4	Dismantling brick masonry walls for all heights, removing and clearing the debris and carting away upto a lead of 2 Km including loading, unloading and spreading and segregating useful materials as directed by Engineer-in-charge, including cost of all labour scaffolding etc. complete as directed by Engineer-in-charge.	35.00	Cu. M.	355.88	12,455.80
5	Brick work using 2nd class ground molded British standard bricks in CM 1:6, in super structure including the cost of all materials, labour, curing etc. complete as directed by Engineer-in-charge.**	19.00	Cu. m.	1,808.00	34,352.00
6	Plastering in CM 1:6, 20 mm thick to internal and external surfaces of walls including the cost of all materials, labour, curing etc. complete as directed by Engineer-in-charge.**	305.00	1 Sq. m.	65.80	20,069.00
7	Plain cement concrete 1:4:8 using 20mm and down graded granite stone metal including the cost of labour, all materials, curing etc., but excluding the cost of all form work, M.S. reinforcement and binding wire etc. complete as directed by Engineer-in-charge. (60% -20 mm size metal and 40% of 10 mm metal).**	5.00	1 Cu. m.	1,560.50	7,802.50

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
8	<p><b>Wall paneling:</b> Supply &amp; fixing with new 12 mm thick particle board one side laminated of approved brand (Eco board) and shade for wall paneling on the wooden frame work (treated with termite and moisture resistant chemical) and also for doors, windows, cup board sliding shutters, pelmets, boxes etc. with necessary fixtures like brass hinges, door handles and stoppers etc. as directed by Engineer-In-charge. The rate quoted shall include of cost of all labour, materials such as particle boards, nails, screws, sliding rollers/bearings, fevicol etc. complete. Frame work with second class teak wood scantlings of size 50 x 25 mm as verticals and horizontals, at an interval of 900 mm c/c shall be made for fixing the Eco board. Joints shall be covered with Steam Beige beading and corners shall be covered with corner Steam Beige beadings of suitable sizes with melamine finish complete in all respects etc. complete as directed by Engineer-in-charge. <b>Make : Eco board</b></p>	705.00	Sq. m	1,600.00	11,28,000.00
9	<p>Supplying &amp; fixing of flush window frame with sides operable shutters and fixed double glazed window with fixed ventilators fabricated from roll formed sections made of galvanised steel powder colour coated (Base steel as per IS 513 "D" quality, galvanised as per IS 277 with Zinc of 120 grams/Sq. m) with total coated thickness of 0.60 mm. External frame should be 46 mmx52 mm. Section for glass beading should be of 20 mmx20 mm and center mullion should be of 46 mmx70 mm and section for shutter should be of 46 mmx46 mm. Coated sections should be with primer coat of epoxy primer of 5-7 microns thick, finish painted with a polyester paint of 12-16 microns thick and back coated with Alkyd backer of 5-7 microns, powder coated with pure polyester powder upto 50-60 microns thick. The frame and shutter sections should be cut to length and miter joined with corner bracket made of CRCA electroplated. Mullion section should be joined with frame/mullion using Nylon Mullion Cap Ethyl Propylene Diamine Monomer (EPDM) gasket should be used all around glass in shutter between frame and glazed shutter and both sides of fixed glass.</p> <p>Accessories: Handle made of high grade aluminium powder coated and with nylon receiver. Gaskets made of Ethyl Propylene Diamine Monomer (EPDM). Corner brackets made of CRCA with zinc phosphating. Mullion caps made of glass filled nylon.</p> <p>Glass: Glass shutter and fixed glass portions should be provided with a glass of 20 mm (5 mm plain glass + 10 mm Hermitically sealed air gap + 5 mm plain glass).</p> <p>Chipped/chased brick work shall be neatly finished with cement plaster and plastered area shall be applied with water proof paint. Paint will be supplied by BHEL on free of cost. Window frame should be fixed to brick/concrete masonry by using Nylon self-expanding caps and driving MS electroplated 80 mm long screws into the caps through frames.</p> <p>Any minor gaps between frame and brick work shall be sealed with silicon material at both sides to avoid seepage of rain water/loss of air condition system etc. complete as directed by Engineer-in-charge.</p> <p>MAKE: SHAKTI/AJANTHA OF NCLSECCOLOR</p>	5.00	Sq. m	4,000.00	20,000.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
10	Supply and fixing of 12 mm thick toughened glass glazed single door shutter with door hardware "Dorma / Ozone" make like floor springs, pivot patch fittings, bottom locks, 'D' Handles and providing with "3M" frosted film in required design etc. complete as directed by Engineer-in-charge. The above door shutter shall be fixed to the aluminium / wooden / glazed door frames of the cabins. The rate shall include cost of all materials, glass, door hardware, frosted film, labour charges etc. complete as directed by Engineer-in-charge.	32.50	Sq. m	10,000.00	3,25,000.00
11	<b>Supply and erection of false ceiling:</b> Providing and fixing in true horizontal level 600 mm x 600 mm false ceiling system manufactured by M/s. Armstrong World Industries / M/s Daiken using DUNE SUPREME RH 99 MICROLOOK EDGE WITH SILHOUETTE GRID, using hot dipped galvanized steel section, rotary stitched main tee of size 15mm x 42 mm web height, having 0.36 mm gauge at every 600 mm center to center maximum and rotary stitched cross tee of size 15 mm x 42 mm, having 0.33 mm gauge at every 600 mm. c/c. and wall angle of size 19 x 19 mm., having 0.35 mm gauge fixed to the periphery of the wall. The above grid is suspended at every 600mm c/c. in both directions using 2.0 mm. thick pre-straightened GI wire, and laying Dune Supreme Microlook Edge ceiling tiles manufactured by M/s. Armstrong World Industries, of size 600mmx600mmx15mm having NRC 0.50, Light reflectance of >85% (WT), thermal conductivity k = 0.052 0.057 W/m0K, Humidity Resistance of 99% (having LIFETIME GUARANTEE against SAG), having Fire Performance CLASS O / CLASS 1 (BS 476), surface having 3 coats of white paint - crisp finely granulated with micro perforations, back of the tile duly sanded and finished with a coat of protective paint over the formed grid and complete in all respects. Boards, where light fixtures to be fixed shall be handed over to Department etc. complete as directed by Engineer-in-charge. <b>Make: Armstrong</b>	1,320.00	Sq. m	1,130.00	14,91,600.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
12a	<b>Vitrified flooring:</b> Supply and laying of vitrified tiles of brighter shades and required design of Premium Quality (1st Quality), in required texture and colour for floors/skirting/cladding using vitrified tiles of size 600x600 mm ( $\pm 5$ mm), inclusive of cost of cutting, chamfering of tiles to required size, with base of Conmax C-500/equivalent tile adhesive for fixing tiles on existing mosaic/cement flooring, laying of tiles in required design with spacers or without spacers jointing the tiles with colour tint if required etc. complete as directed by Engineer-in-charge. The cost of the tile shall be Rs. 100/- per Sft. (inclusive of all taxes and duties) and tiles of required make will be selected by department within the above specified cost. The rate quoted shall include cost of all materials, labour, adhesives, colour tint material, leads and lifts etc. complete. Amount will be paid on the basis of measurement of the area of finished work only. It also includes surface preparation of existing ceramic floor giving necessary slopes, cleaning joints and grouting joints with pigmented additives to match shade of the tile. This includes making pockets for electrical, communication, network cables, junction boxes etc. complete in all respects.	720.00	1Sq. m.	1,500.00	10,80,000.00
b	<b>Vitrified flooring:</b> Supply and laying of vitrified tiles of brighter shades and required design of Premium Quality (1st Quality), in required texture and colour for floors/skirting/cladding using vitrified tiles of size 600x600 mm ( $\pm 5$ mm), inclusive of cost of cutting, chamfering of tiles to required size, with base of Conmax C-500/equivalent tile adhesive for fixing tiles on existing mosaic/cement flooring, laying of tiles in required design with spacers or without spacers jointing the tiles with colour tint if required etc. complete as directed by Engineer-in-charge. The cost of the tile shall be Rs. 60/- per Sft. (inclusive of all taxes and duties) and tiles of required make will be selected by department within the above specified cost. The rate quoted shall include cost of all materials, labour, adhesives, colour tint material, leads and lifts etc. complete. Amount will be paid on the basis of measurement of the area of finished work only. It also includes surface preparation of existing ceramic floor giving necessary slopes, cleaning joints and grouting joints with pigmented additives to match shade of the tile. This includes making pockets for electrical, communication, network cables, junction boxes etc. complete in all respects.	600.00	Sq. m.	950.00	5,70,000.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
13	<b>Full height glass partitions for cabins:</b> Providing & fixing of Aluminum frame work using 50 x 50 x 1.2 mm box sections placed at approximately 600 mm c/c horizontally and vertically and forming a grid size of 600 x 600 mm. The frame work is to be adequately anchored in RCC slab for a firm support. Then fixing of 12 mm MDF board on both sides of Aluminum frame work upto the false ceiling level. Providing and fixing of 12 mm Toughened Glass in required size for partitions. The glass partition shall be provided with "3M' frosted film in required design. The joints of the glass partitions shall be flushed perfectly without any gaps and joints shall be filled with silicon compound. If necessary bottom of the glass shall be fixed in PVC sleeve, subsequently fixed into floor. The door opening shall be deducted for payment etc. complete as directed by Engineer-in-charge.	260.00	Sq. m.	4,000.00	10,40,000.00
14	Supply & fixing of aluminium full/half height partitions with new anodised aluminium box section powder coated in required colour of size 101.60 x 44.45 x 2.00 mm for verticals, top and bottom horizontals at spacing suiting to the site requirements as approved. Wherever doors are coming wooden runners are to be provided in the box section. The rate shall include grouting of frame to the floor properly fixed to at ends to walls, supply & fixing of 12 mm toughened glass in required sizes, aluminium sections, labour, frosted film on glass with specified design and sizes etc. complete as directed by Engineer-in-charge. (The door opening shall be deducted for payment).	163.00	Sq. m	4,000.00	6,52,000.00
15	Supply & fixing of Roller blinds including channels, fabric etc. complete and the basic cost of the blinds shall be in the range of Rs. 125/- per S Ft. The colour and design of the blinds will be selected by department within the above specified cost etc. complete as directed by Engineer-in-charge.	75.00	Sq. m	1,500.00	1,12,500.00
16	Supply and fixing of vertical blinds 100 mm in required colour along with channels, fabric bottom weights etc. complete. The basic cost of the blinds shall be in the range of Rs. 70/- per S Ft. The colour and design of the blinds will be selected by department within the specified cost. The agency shall procure the same etc. complete as directed by Engineer-in-charge.	120.00	Sq. m	800.00	96,000.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
17	<p><b>Supply &amp; fixing of false flooring:</b> The access raised floor in required colour with point load of 3.6 KN/over 25 Sq. mm and UDL of 12 KN/Sq. m; panels manufactured from steel with lightweight cementitious core in the size 600 x 600 x 35 mm. The bottom of the panel shall be embossed in hemispherical shape to give strength and flexural rigidity. The entire panel shall be finished with electro deposition of cathodic epoxy paint on the exposed surface for lifetime protection. The panel has to be placed on the pedestal made from all steel zinc plated construction. Pedestal assembly shall provide for easy adjustment of leveling and accurately align panels to ensure lateral restrain. Pedestal head shall be designed to avoid rattle or squeaks. The steel base plate of the pedestal shall be fixed on to the sub-floor with epoxy pedestal adhesive and/or mechanical fixing. An all-steel rectangular stringer system having prepunched holes at both ends to ensure correct alignment with pedestal heads should be applied etc. complete as directed by Engineer-in-charge.</p>	20.00	Sq. m	4,650.00	93,000.00
18	<p>Supply &amp; fixing of Aluminium metal tiles powder coated in false ceiling suitable to the Armstrong false ceiling grid size under the roof mounted AC indoor units. Colour of the tile shall be matched with the colour of Armstrong boards etc. complete as directed by Engineer-in-charge.</p>	20.00	Each	380.00	7,600.00
19	<p><b>Single / Double leaved fully glazed patch fitting doors:</b> Supply and fixing of Single / Double glazed door to the door frame of size 75 mm x 200 mm thick BT wood door frame and the facias of the wooden frame shall be covered with 6 mm teak veneer in required colour and design. Supply and fixing of 12 mm toughened single / double glass door leaves fixed in wooden frame all around the glass and wooden frame size shall be 150 mm x 40 mm. All teak wood frame surfaces shall be fixed with teak veneer in required colour and design and the teak veneer of door frame and shutter frame shall be finished with melamine polish into a neat finish. The glass doors shall be fixed to the door frame with door hardwares like floor spring, patch fitting / pivot fitting, center lock and 'D' Handles of make "<b>Dorma / Ozone</b>". Supply and fixing of "3M" frosted film on the glass door in required design complete in all respects, as directed by Engineer-in-charge. Payment will be made for the measurement of finished door along with frame. The price quoted shall includes material, labour, accessories etc. complete as directed by Engineer-in-charge.</p>	8.15	Sq. m	15,000.00	1,22,250.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
20	<p><b>Dismantling of existing windows along with frames and providing Glazed Windows</b></p> <p>Dismantling and removing the existing windows along with frames including chipping/chasing brick work/concrete for removal and stacking in stores as directed by Engineer in charge. Supplying &amp; fixing of flush window frame with sides operable shutters and fixed double glazed window with fixed ventilators fabricated from roll formed sections made of galvanised steel powder colour coated (Base steel as per IS 513 "D" quality, galvanised as per IS 277 with Zinc of 120 grams/Sq. m) with total coated thickness of 0.60 mm. External frame should be 46 mmx52 mm. Section for glass beading should be of 20 mmx20 mm and center mullion should be of 46 mmx70 mm and section for shutter should be of 46 mmx46 mm. Coated sections should be with primer coat of epoxy primer of 5-7 microns thick, finish painted with a polyester paint of 12-16 microns thick and back coated with Alkyd backer of 5-7 microns, powder coated with pure polyester powder upto 50-60 microns thick. The frame and shutter sections should be cut to length and miter joined with corner bracket made of CRCA electroplated. Mullion section should be joined with frame/mullion using Nylon Mullion Cap Ethyl Propylene Diamine Monomer (EPDM) gasket should be used all around glass in shutter between frame and glazed shutter and both sides of fixed glass.</p> <p>Accessories: Handle made of high grade aluminium powder coated and with nylon receiver. Gaskets made of Ethyl Propylene Diamine Monomer (EPDM). Corner brackets made of CRCA with zinc phosphating. Mullion caps made of glass filled nylon.</p> <p>Glass: Glass shutter and fixed glass portions should be provided with a glass of 20 mm (5 mm plain glass + 10 mm Hermitically sealed air gap + 5 mm plain glass).</p> <p>Chipped/chased brick work shall be neatly finished with cement plaster and plastered area shall be applied with water proof paint. Paint will be supplied by BHEL on free of cost. Window frame should be fixed to brick/concrete masonry by using Nylon self-expanding caps and driving MS electroplated 80 mm long screws into the caps through frames.</p> <p>Any minor gaps between frame and brick work shall be sealed with silicon material at both sides to avoid seepage of rain water/loss of air condition system.</p> <p><b>MAKE: SHAKTI/AJANTHA OF NCLSECCOLOR</b></p>	2.00	Sq. m.	4,000.00	8,000.00
21	<p>Supply and fixing of toilet doors along with teak wood door frame of size 100 mm x 75 mm teak scantlings and flush door shutter and laminating both door frame and shutter with premium quality teak vineer in required colour and design and melamine polish. Flush door shutter shall be chemically treated and water/insect/borer proof and 30 mm thick. This includes providing brass hinges, brass aldrops, brass tower bolts, brass handles and brass door stoppers etc. complete as directed by Engineer-in-charge.</p>	8.00	Sq. m	3,000.00	24,000.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
22	Supply & fixing of 18 mm thick best quality Jet Black colour machine cut mirror polished granite slabs in required sizes for counter wash basins, floorings, vanity counter, claddings, facias etc. including cutting, champering, rounding and mirror polishing etc. complete as directed. Cost of granite slabs shall be Rs. 1600/- per Sq. m and granite slabs of required design and colour will be selected by department etc. complete as directed by Engineer-in-charge.	16.00	Sq. m	3,071.00	49,136.00
23	Supply & fixing 10 mm thick best quality approved colour and design machine cut granite tiles of size 600 mm x 300 mm with mirror polished granite stone for flooring, platforms, cladding, vanity counter Facia etc. and for any other locations including cutting, champering, rounding and mirror polishing etc. complete as directed. Cost of the granite shall be Rs. 650/- per sq. m and tiles will be selected by department within the above specified cost etc. complete as directed by Engineer-in-charge.	25.00	Sq. m	810.00	20,250.00
24	Supply & fixing of 6 mm thick mirror of approved quality "Modi float glass", with 6 mm thick hard board back and with best quality Steam beige frame (design beading) all round the mirror including necessary clamps, polishing to the beading, cost of all materials etc. complete as directed by Engineer-in-charge.	3.00	Sq. m	1,445.00	4,335.00
25	Thorough cleaning of existing oil bound distemper paint/white washing with water, by scrapers for old walls and stone rubbing for new plastered walls with suitable tools and applying one coat of oil based cement primer and applying 3 coats altek lappam one coat after drying the previous coat and sand papering and applying two coats of acrylic washable distemper etc., complete as directed by the Engineer-in-charge. Rate shall include all materials like lappum, primer, tools and tackles, scaffolding etc. complete as directed by Engineer-in-charge. <b>Only acrylic washable distemper will be issued by BHEL at free of cost.</b>	20.00	Sq. m	84.10	1,682.00
26	Supply and fixing of "Parryware" make ceramic oval shape below counter wash basin size 550 mm x 450 mm, Code No.: 0418, regular in colour (light Ivory) with all accessories like brackets, screws, waste coupling half thread/full thread (Code No. T9910A), connecting hose 2' (Cat No. T991999) etc. complete as directed by Engineer-in-charge.	4.00	Each	2,024.00	8,096.00
27	Dismantling of existing EWC with flush tank and other fixtures carefully and handing over to stores for reuse and supply & fixing of new "Parryware" make ceramic cascade water closet suite with "P/S" trap including Polypropylene seat cover with all accessories regular in colour along with ceramic matching colour low level cistern 10 liters capacity with wonder flush fittings etc. complete as directed by Engineer-in-charge.	1.00	Each	6,985.00	6,985.00
28	Supply & fixing of new "Parryware" make, Orissa Pan size 580 mm (Cat 0109/17) with P/S trap box rim with internal foot treads including ceramic low level flushing cistern 10 liters capacity with Parryware wonder flush kit, regular in colour with all required accessories etc. complete as directed by Engineer-in-charge.	2.00	Each	4,261.00	8,522.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
29	Supply & fixing of new urinary pans "Parryware" make, Ceramic, Model (Cat 0575) "New Magnum Urinal" (600 x 400 mm) along with all accessories, CP spreader brackets etc. regular in colour along with partition for Magnum Urinal ceramic, 'Z' type brackets to be screwed to the wall at the bottom size 810 x 390 mm in regular colour etc. complete as directed by Engineer-in-charge.	4.00	Each	3,933.00	15,732.00
30	Supply and fixing of "Jaquar " make Pressmatic Urinal Flush Valve for Urinal Pots (Cat No. 51027), with all accessories etc. complete as directed by Engineer-in-charge.	4.00	Each	1,320.00	5,280.00
31	Supply and fixing of "Jaquar (Continental)" make sink cock with raised 'J' shaped swinging spout, Cat No. 359 etc. complete as directed by Engineer-in-charge.	1.00	Each	1,060.00	1,060.00
32	Supply and fixing of "Jaquar" make angular stop cock, Cat No. 053 etc. complete as directed by Engineer-in-charge.	4.00	Each	495.00	1,980.00
33	Supply and fixing of "Jaquar (Florentine)" make 2-way bib cock with wall flange, Cat No. 5041 etc. complete as directed by Engineer-in-charge.	3.00	Each	1,230.00	3,690.00
34	Supply and fixing of "Jaquar (Allied)" make Health Faucet with 8 mm dia, 1 m long flexible tube and wall hook, Cat No. 573 etc. complete as directed by Engineer-in-charge.	2.00	Each	1,325.00	2,650.00
35	Supply and fixing of Paper Holder	3.00	Each	500.00	1,500.00
36	Supply and fixing of towel ring	3.00	Each	500.00	1,500.00
37	Supply and fixing of Soap dish	2.00	Each	500.00	1,000.00
38	Supply and fixing of Odonil Holder	2.00	Each	500.00	1,000.00
39	Supply & fixing coloured glazed tiles of required make ceramic tiles of Premium (First) quality of required size and of approved shade and design, for walls/flooring over a base of CM 1:4, including neat finishing and jointing etc. complete. (Corners are to be joined by mitering the tiles). The cost of the tile shall be Rs. 70/- per S Ft. The make, design and colour of tile will be selected by department within the above specified cost. The rate quoted shall also include the cost of all materials, labour etc. complete as directed by Engineer-in-charge. Payment will be made for finished item of work only.	75.00	Sq. m	764.00	57,300.00
40	Supply & fixing of walk way tiles of required design, colour and make, with base of Conmax C-500 / equivalent tile adhesive for fixing tiles on existing flooring. The cost of the tile shall be Rs. 50/- per S Ft. The make, design and colour of tile will be selected by department and agency will procure the same within the above specified cost. The rate quoted shall also include the cost of all materials, labour, leads and lifts etc. complete as directed by Engineer-in-charge. Payment will be made for finished item of work only.	65.00	Sq. m	650.00	42,250.00
41	Supplying & fixing in position with suitable with PVC pipe of approved quality including chasing brick work / concrete and making good the same after replacing wherever necessary etc. complete as directed by Engineer-in-charge. including all accessories like bends, tees, elbows etc. - 75 mm (3") dia.	50.00	R M	80.78	4,039.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
42a	Supply & fixing of GM peet valves, heavy quality of Leader/Zoloto make of the following nominal bore etc. complete as directed by Engineer-in-charge. a) 15 mm (1/2") dia	2.00	Each	242.00	484.00
b	20 mm (3/4") dia.	2.00	Each	327.00	654.00
c	25 mm (1") dia.	2.00	Each	482.00	964.00
43	Supply & fixing of Aluminium Composite Panel (ACP), 2 mm thick in required colours for interiors/exteriors, consisting of two layers of aluminium skins of 0.15 mm thick sandwiching a thermo plastic core in continuous lamination process with PVDF Resin coating for interior grades ensuring long colour and no fungal attacks. Base framework with aluminium sections shall be fixed over the brick work and the above composite panels shall be fixed to the framework as cladding. There shall not be any colour variation in panels. It includes cost of labour, materials, accessories, adhesives, scaffolding, wastages, transport, taxes, fixing into a neat finish in aesthetic point of view, without any undulations in facias. Any undulations in walls shall be maintained into one level and the required packing material shall be provided to maintain the neat finish. Payment will be made for finished work only etc. complete as directed by Engineer-in-charge.	10.00	Sq. m	3,600.00	36,000.00
44	Supplying and fixing of 50mm (2") dia stainless steel tubular railings (pipe of A304 grade 1.2 mm thick) as per design and drawing of BHEL. The cost will include bending, welding/brazing, buffing, polishing, fixing to the plumb, wastage, etc., complete. The above pipe will be used for hand railing, vertical pipe, horizontal pipe as per requirement. (The vertical pipe will be embedded in concrete for a depth of 45 cm from finished floor level along with necessary hold fasts. The verticals will be at intervals of 1.2 to 1.5 M.).The payment will be made for finished quantity measured above finished floor level). The stainless steel grade/quality shall be A304 etc. complete as directed by Engineer-in-charge.	20.00	Sq. m	1,435.00	28,700.00
45	Supply & fixing of Elvis corner glass shelf along with fixtures like clamps, screws etc. complete as directed by Engineer-in-charge.	100.00	Each	715.00	71,500.00
<b>Total of Part A - Civil Works</b>				₹	<b>72,42,207.98</b>
<b>Part B - Air conditioning Works</b>					
1	Supply, installation, testing & Commissioning of 17.0 TR ceiling suspended Duct able split a/c unit, Three phase with 17.0 TR 1no indoor unit and 8.5 TR 2.nos outdoor Unit with scroll compressor & remote control along with electronic control with remote control pad, necessary cabling, DBs, switches, inclusive of all connected accessories etc. complete in all respects etc. complete as directed by Engineer-in-charge. <b>MAKE: LG/VOLTAS/BATLIBOI/CARRIER/BLUE STAR</b>	4.00	Each	3,45,000.00	13,80,000.00
2a	Supply of 1.8 TR / 2.0 TR Cassette AC comprising indoor unit, outdoor unit with electronic control panel and remote control pad, DB's, Switches etc. for mini conference hall and main conference hall complete in all respects. This includes commissioning of indoor and out door units including necessary civil works etc. complete as directed by Engineer-in-charge. <b>MAKE: LG/VOLTAS/BATLIBOI/CARRIER/BLUE STAR.</b>	3.00	Each	57,000.00	1,71,000.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
b	Copper piping with insulation between indoor and outdoor etc. complete as directed by Engineer-in-charge.	50.00	R M	690.00	34,500.00
c	Electrical wiring between outdoor and indoor	58.00	R M	126.00	7,308.00
d	Drain Piping 25 mm	50.00	R M	103.00	5,150.00
e	Machine installation and commissioning (indoor & outdoor) including necessary civil works.	12.00	Each	3,450.00	41,400.00
	<b>Note: All out door Air conditioner units and compressor units shall be located on the terrace/on chajjas of the building, whichever is feasible.</b>				
3	GSS Ducting complete with angle iron flanges, high tech supports as per SMACNA specification etc. complete as directed by Engineer-in-charge. 22 gauge	40.00	Sq. m	1,053.00	42,120.00
4	24 gauge	200.00	Sq. m	862.00	1,72,400.00
5	The acoustic lining in the duct using fiber glass with 26 g aluminum perforated sheet using GI nuts and bolts etc. complete as directed by Engineer-in-charge. 12.5mm thick	90.00	Sq. m	287.00	25,830.00
6	Providing Thermal Insulation with 25mm thick fiber glass crown 150mm covered with aluminum foil etc. complete as directed by Engineer-in-charge.	400.00	Sq. m	615.00	2,46,000.00
7	MS black coated Collar Dampers etc. complete as directed by Engineer-in-charge.	19.00	Sq. m	21,804.00	4,14,276.00
8	Main duct Volume control dampers made out of 18 gauge GI sheet etc. complete as directed by Engineer-in-charge.	4.00	Sq. m	12,075.00	48,300.00
9	Fire retardant flexible canvas connection etc. complete as directed by Engineer-in-charge.	5.00	Each	483.00	2,415.00
10	Condensate drain pipe of standard make PVC with insulation of 50mm dia etc. complete as directed by Engineer-in-charge.	145.00	R M	115.00	16,675.00
11	Power and control cabling between the panel, indoor unit and out door unit of the following sizes 3c 1.5 SQ.MM	1,350.00	R M	57.00	76,950.00
12	3c 2.5 SQ.MM	900.00	R M	60.00	54,000.00
	<b>Note: i. Air balancing to be carried out to show anywhere in the area 24±2°C in peak summer also. Note: ii. Energy Meter for total load (lighting, A/C etc.) of the floor shall be provided.</b>				
13a	Supply, installation, testing & Commissioning of 1.5 TR Hi wall Split room air conditioner along with electronic control with remote control pad, necessary cabling, DBs, switches, inclusive of all connected accessories etc. complete in all respects. This includes commissioning of indoor and out door units including necessary civil works etc. complete as directed by Engineer-in-charge. <b>MAKE: LG/VOLTAS/BATLIBOI/CARRIER/BLUE STAR.</b>	6.00	Each	25,000.00	1,50,000.00
b	Copper piping with insulation between indoor and outdoor etc. complete as directed by Engineer-in-charge.	60.00	R M	690.00	41,400.00
c	Electrical wiring between outdoor and indoor	120.00	R M	126.00	15,120.00
d	Drain Piping 25 mm	60.00	R M	103.00	6,180.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
14	<b>Supply, installation, testing &amp; Commissioning of following piping / ducting for Air Conditioning units</b> Copper refrigerant piping with insulation foam between indoor and outdoor air cooled condensers of the following sizes etc. complete as directed by Engineer-in-charge. <b>Hard drawn pipe</b> 28mm dia	75.00	One	989.00	74,175.00
15	--do-- Hard drawn pipe 12mm dia	75.00	One	661.00	49,575.00
16	<b>Soft drawn pipe</b> 12.5mm dia	75.00	One	402.00	30,150.00
14	Soft drawn pipe 6.5mm dia	50.00	One	276.00	13,800.00
18	22 gauge	50.00	One	1,053.00	52,650.00
19	24 gauge	200.00	One	862.00	1,72,400.00
20	Fire damper made out of 18 gauge GI sheet with fusible link etc. complete as directed by Engineer-in-charge.	2.00	One	3,231.00	6,462.00
21	Fabrication and erection of MS channel/angle frame work for installation of mounting of out door units including grouting with concrete/anchor bolts into brick wall/concrete/floors etc. complete as directed by Engineer-in-charge. <b>Required MS channels/angles shall be supplied by BHEL on free of cost.</b>	3.00	Each	7,305.00	21,915.00
22	Supply & fixing of Aluminium diffusers and dampers powder coated removable core type, 4-way. These diffusers shall be suitable for Armstrong false ceiling of grid size 600 mm x 600 mm and colour of the diffuser shall be matched with the colour of Armstrong boards etc. complete as directed by Engineer-in-charge.	90.00	Each	1,840.00	1,65,600.00
23	Supply & fixing of Aluminium diffusers with powder coated without dampers, removable core type 4-way return air Neck - 18" x 18", Outer 590 x 590 mm, Reflection - 30. These diffusers shall be suitable for Armstrong false ceiling of grid size 600 mm x 600 mm and colour of the diffuser shall be matched with the colour of Armstrong boards etc. complete as directed by Engineer-in-charge.	90.00	Each	1,403.00	1,26,270.00
	<b>Note: All out door Air conditioner units and compressor units shall be located on the terrace/on chajjas of the building, whichever is feasible.</b>				
	<b>Total of Part B - Air conditioning works</b>			₹	<b>36,64,021.00</b>
	<b>Part C - Electricals works</b>				
1	<b>Cable Raceways</b> Supply, installation, testing & Commissioning of separate floor Raceways with covers & Cable Trays with suitable covers for all ratings of power supply points, both 230VAC and 415 V AC Supply & Installation of 300x50x2.0mm GI ladder type Cable Tray with all accessories and supporting arrangement from ceiling or Wall complete in all respects.	90.00	R M	661.00	59,490.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
2a	Supply & Installation of in-screed floor raceways (to be run separately for power, network and telephone cables) consisting following rectangular Aluminium sections including chasing and refilling the trench as per the route shown in the drawing and approved by Engineer in charge at site including clamping & closing the open pipe ends temporarily by suitable end covers against entry of dust or any other foreign material complete in all respects. 96 x 38 mm	900.00	R M	431.00	3,87,900.00
b	56 x 38 mm	350.00	R M	374.00	1,30,900.00
3	Supply & Installation of floor junction boxes with pre-fabricated stainless steel top cover, 3mm thick provided with suitable Stainless Steel screws for fixing to the junction boxes, of size 300mm x 300mm x 50mm / 150x150x50 fabricated out of MS painted sheets complete in all respects. <b>Make : Locally fabricated</b>	300.00	Each	546.00	1,63,800.00
4	<b>Removal of existing electrical equipment</b> Removing all existing switch socket, cable, wire, DB, Telephone socket, Networking socket, Telephone and data cable or any other equipments including stacking and transporting to the departmental stores etc. complete as directed by Engineer-in-charge.	2.00	LS	34,500.00	69,000.00
5	Supply, Installation and commissioning of <b>MAIN LT PANEL</b> , floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-draw out, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper bus bars 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required' housing below mentioned switchgears / meters complete in all respects. This panel should consist of following. Digital Energy meter with RS 485 port - 1 No. 250A 50KA TPN MCCB unit as Incomer - 1 No. 160A,50KA TPN MCCB as outgoing - 1 No. 63A, TPN MCB as outgoing - 6 Nos. 40A, TPN MCB as outgoing - 4 Nos. 0-250A, Ammeter with CT & inbuilt S/S - 1 No. 0-415V, Voltmeter with inbuilt S/S - 1 No. TP&N, Aluminum busbars of suitable size thick with PVC sleeving - 1 Set RYB, indicating lamps with resistors and fuses - 1 Set  This includes termination of the cables, end terminators, material, labour, commissioning etc. complete as directed by Engineer-in-charge.	2.00	Set	74,750.00	1,49,500.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6	Supply, Installation and commissioning of <b>UPS OUTGOING PANEL</b> , floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-draw out, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper busbars 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required' housing below mentioned switchgears / meters. Complete in all respects. This should comprise of following. Digital Energy meter with RS 485 port - 1 No. 250A 4P MCCB as Incomer - 1 No. 63A, 4P, MCB as outgoing - 5 Nos. 0-250A, Ammeter with CT & inbuilt S/S - 1 No. 0-415V, Voltmeter with inbuilt S/S - 1 No. TP&N, Aluminum busbars of suitable size thick with PVC sleeving - 1 Set RYB, indicating lamps with resistors and fuses - 1 Set	2.00	Set	66,890.00	1,33,780.00
7	Supply and installation of 8 way, TPN, MCB type Lighting Distribution Board (LDB) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin' proof, and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring complete with earthing lugs housing following switchgears: Complete in all respects. This should comprise the following. 40A, FP ELCB as incomer(100mA) - 1 No. 10A, SP, MCB outgoing(10KA) - 24 Nos. <b>Make: Siemens/Legrand/Hager</b>	3.00	Set	12,334.00	37,002.00
8	Supply, Installation and commissioning of 8 way, TPN, MCB type Power Distribution Board (PDB) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin' proof, and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring complete with earthing lugs housing following switchgears: 63A, FP ELCB as incomer(100mA) - 1 No. 16/20A, SP, MCB outgoing(10KA) - 24 Nos. <b>Make: Siemens/Legrand/Hager</b>	3.00	Set	9,344.00	28,032.00
9	Supply, Installation and commissioning of 8 way, TPN, MCB type Computer Power Distribution Board (CPDB) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin' proof, and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring complete with earthing lugs housing following switchgears, complete in all respects.: 40A, FP MCB Isolator as incomer(10KA) - 1 No. 16A, SP, MCB outgoing(10KA) - 24 Nos. <b>Make: Siemens/Legrand/Hager</b>	3.00	Set	10,988.00	32,964.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
10	Supply, Installation and commissioning of 8way SPNDB similar to above but for emergency lighting distribution (ELDB) having below mentioned switchgears, complete in all respects. 32A, DP, MCB as incomer - 1 No. 6A, SP, MCB, outgoing (10KA) - 6 Nos. Supply, Installation and commissioning of 20A, SP, MCB, box with 20A, metal clad plug-socket for termination of cable for room A/C <b>Make: Siemens/Legrand/Hager</b>	3.00	Set	3,910.00	11,730.00
11	<b>CABLES / MAINS</b> Supply & Installation of 1100V grade FRLS armoured cable having sector / circular shaped aluminum / copper conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed conforming to IS:1554 laid on wall/ceiling using GI clamps & spacers as per route shown at site and further as directed by Consultant at site in the following sizes, complete in all respects.: Supply & laying of 4C x 120 SQ.MM Copper armoured cable in suitable size of PVC Conduit.	110.00	R M	3,450.00	3,79,500.00
12	Supply & laying of 4C x 70 SQ.MM. copper flexible in suitable size of PVC Conduit etc. complete as directed by Engineer-in-charge.	40.00	R M	2,000.00	80,000.00
13	Supply & laying of 4C x 16 SQ.MM Copper armoured cable etc. complete as directed by Engineer-in-charge.	100.00	R M	1,035.00	1,03,500.00
14	Supply & laying of 4C x 10 SQ.MM copper armoured cable etc. complete as directed by Engineer-in-charge.	230.00	R M	690.00	1,58,700.00
15	Supply & laying of 4C x 6 SQ.MM copper armoured cable etc. complete as directed by Engineer-in-charge.	125.00	R M	517.00	64,625.00
16	Supply and installation of end terminations for above mentioned cables, including compressed type brass glands, crimping type copper lugs, insulation tape etc. as required complete with earthing of glands in following sizes, complete in all respects. 4R x 240 SQ.MM copper armoured cable.	6.00	Each	1,380.00	8,280.00
17	4C x 70 SQ.MM. copper flexible cable	6.00	Each	920.00	5,520.00
18	4C x 16 SQ.MM Copper flexible cable	6.00	Each	747.00	4,482.00
19	4C x 10 SQ.MM copper flexible cable	6.00	Each	747.00	4,482.00
20	4C x 6 SQ.MM copper flexible cable	6.00	Each	575.00	3,450.00
21	<b>WIRING</b> Supply & Installation of surface/concealed point wiring FRLS using 600v grade 1.5 SQ.MM copper conductor PVC insulated wires (with proper R,Y,B color code ) pulled through 1.2mm thick PVC conduits laid concealed over false ceiling or in wall chases including 1.0 SQ.MM green color copper earth wire and provision of grid plate type switches as approved by architect, complete in all respects. Primary light points of 5A switch. (Switch shall be of <b>ROMA Type</b> )	175.00	Each	1,087.00	1,90,225.00
22	Supply & installation of above for Secondary light points looped from the above point etc. complete as directed by Engineer-in-charge.	200.00	Each	385.00	77,000.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
23	Supply & installation of Hub/Server Room Power Points(3R of 4sqmm copper wire in PVC conduit) with 32A Metal Clad Socket with M.S Enclosure control by a 32 A DP MCB.with Top in enclosure from Hub/Server room DB etc. complete as directed by Engineer-in-charge.	2.00	Each	2,760.00	5,520.00
24	Supply and laying of 1100V grade PVC insulated, copper conductor cables in 1.5mm thick P.V.C. conduits, run above the false ceiling, concealed in the wall or partition, saddles at every 600mm c/c. A separate neutral shall be run for each circuit. The rate shall include all fixing accessories like collars, tees, elbows, providing fan hooks, ceiling roses, holders, wooden blocks, switches, sockets, switch mounting MS boxes, MS Junction Boxes etc., of approved make, complete in all respects, for sl.No. 27, 28 & 30 (Separate rate is not required to be quote for item No.26)				
25	Supply and laying of 2 runs of 2.5 SQ.MM. PVC insulated copper conductor FRLS cable along with 1run of 1.5Sq.mm PVC insulated copper conductor cable. Run in a 19mm dia. 1.2mm thick PVC conduit on surface of the ceiling or in wall etc. complete as directed by Engineer-in-charge.	4500.00	R M	144.00	6,48,000.00
26	Supply & fixing of 6A/16A Plug Point directly taken from DB for Pantry/geyser / zerox / fridge/ split AC units. <b>Make: Roma of Anchor or North West</b>	45.00	Each	862.00	38,790.00
27	Supply and laying of 2 runs of 4.0 SQ.MM. PVC insulated copper conductor FRLS cable along with 1 runs of 1.5Sq.mm PVC insulated copper conductor cable. (1-PH AC'S) Run in a 25mm dia., 1.2mm thick PVC conduit, on surface of the ceiling or in wall, complete in all respects etc. complete as directed by Engineer-in-charge.	1000.00	R M	172.00	1,72,000.00
28	Supply and installation of 6A, 5 pin 3 nos. shuttered type sockets controlled by 1no. 16A switch with suitable size of front plate etc. ( <b>UPS POWER set</b> ); Quantity of outlets are: 4nos. At each work stations, cubicles, 6 nos. each in rooms of PAs, in all cabins of GM, AGMs, conference rooms, location of the points will be finalised in consultation with engineer in charge, complete in all respects. <b>Make: Roma of Anchor</b>	120.00	Each	1,552.00	1,86,240.00
29	Supply and installation of one no 6A 5pin shuttered type sockets controlled by 1no. 6A switch with suitable size of front plate etc. complete as directed by Engineer-in-charge. ( <b>RAW POWER set</b> ) <b>Make: Roma of Anchor</b>	120.00	Each	920.00	1,10,400.00
30	<b>EARTHING</b> Supply and installation of 2 nos. of separate earth pits each with material for power and network (including excavation) comprising of 600mm x 600mm x 3mm thick copper plate buried at a minimum depth of 2.5 meter including necessary materials like charcoal, salt etc. as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement, complete in all respects.	6.00	Each	24,150.00	1,44,900.00
31	Supply and installation of copper wire/strips in following sizes 14 SWG copper bare wire	450.00	R M	57.00	25,650.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
32	Supply and installation of isolated earthing system for computer etc. using insulated green yellow copper earthing wire laid through 20mm PVC conduits from separately made earth pit to the equipment in following sizes Supply and installation of 16 sqmm, cu., in 20mm PVC flexible conduit.	350.00	R M	172.00	60,200.00
33	Supply and installation of 6 sqmm, cu in 20mm PVC flexible conduit.	550.00	R M	86.00	47,300.00
34	<b>LIGHTING FIXTURES</b> Supply & Installation of lighting fixtures with lamps as per the details below including necessary hardware such as clamps, nuts, bolts, nails, screws and suspension rods as required for fixing the fixtures in position as directed by architect / consultant, complete in all respects. Supply & fixing of energy efficient light fitting of Philips FBS 450/236 D6 HF wing -C- LX recess mounted direct, indirect light efficiency.	150.00	Each	5,175.00	7,76,250.00
35	Supply & Installation of Recess mounted down lighter luminaries with specular finish reflector 2 x 18 W CFL Cat No Philips make:FBH145/218.	32.00	Each	2,300.00	73,600.00
36	Supply & Installation of Occupancy sensors with bypass facility for cabins. This includes wiring from sensor to board and supply of required accessories. <b>Make: Philips/Wipro/Steinel</b>	9.00	Each	6,325.00	56,925.00
37	Supply & Installation of exhaust fans, 12" size, Heavy Duty <b>Make: Philips/Crompton Greaves</b>	5.00	Each	1,437.00	7,185.00
<b>Total of Part C - Electrical works</b>				₹	<b>46,36,822.00</b>
<b>Part D - Smoke and fire Detection alarm</b>					
1	<b>SMOKE AND FIRE DETECTION &amp; ALARM SYSTEM</b> Supply, installation and commissioning of microprocessor based, Two Loop Intelligent Addressable Fire Alarm Control Panel with independent battery backup suitable for 8 hours AND WITH the following features, complete in all respects.: a) 159 detectors and 159 modules per SLC loop b) The system display shall provide a 640-Character backlit alphanumeric Liquid Crystal Display (LCD). It shall also provide ten Light-Emitting-Diodes (LEDs), that indicate the status of the following system parameters: AC POWER, FIRE ALARM, PRE-ALARM, SECURITY, SUPERVISORY, SYSTEM TROUBLE, OTHER EVENT, SIGNALS SILENCED, POINT DISABLED, and CPU FAILURE. c) Built in Alarm, trouble and supervisory relays d) Response time of less then 2 seconds. e) UL Listed f) Pre-signal and Positive Alarm Sequence: The system shall provide means to cause alarm signals to only sound in specific areas with a delay of the alarm from 60 to up to 180 seconds after start of alarm processing. g) Print Functions: The system shall provide means to obtain a variety of reports listing all event, alarm, trouble, supervisory, or security history. h) Shall comply with requirements of NFPA Standard 72 & NFPA - 318. The system shall be electrically supervised and monitor the integrity of all conductors.	2.00	Set	1,98,145.00	3,96,290.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
2	Supply & installation of Intelligent Multicriteria Detector with mounting base and surface mounting kit and with following features: a) Addressable device, designed to monitor a minimum of photoelectric and thermal technologies in a single sensing device b) Utilizing advanced electronics that react to slow smoldering fires and thermal properties all within a single sensing device. c) Microprocessor design & shall be capable of selecting the appropriate sensitivity levels based on the environment type and then have the ability to automatically change the setting as the environment changes d) Twin LEDs for 360 degree viewing. e) UL Listed f) Operating Voltage :15 to 32 Vdc 40 Nos. of these Multicriteria Detectors will be located above the false ceiling for detecting any short circuits and balance 52 Multicriteria Detectors will be located in ALL the cabins, electrical control room, server room, conference halls etc.	50.00	Each	5,405.00	2,70,250.00
3	Supply & installation of Addressable Duct Sensor with housing and accessories and with following features: a) Continuous sensitivity monitoring and alarm verification from the panel b) Simple change of detector heads c) Easily mounting on round and rectangular ducts d) Air Velocity rating from 150 to 1200 meters per minute e) Poly Carbonate cover for the convenient visual inspection of sampling tube filters f) UL Listed g) Duct sampling tube should be of maximum 3.7 meters.	4.00	Each	13,800.00	55,200.00
4	Supply & installation of Addressable Manual Break Glass Point with accessories and with following features: a) Direct decade addressing b) Built in electronics c) LED for Activation d) Designed to the requirement of BS5839 part -2 e) Operating voltage: 24 Vdc f) Key reset g) Meets UL-38 rating	4.00	Each	5,060.00	20,240.00
5	Supply & installation of Addressable Isolator Module with accessories and with following features: a) Powered by SLC loop directly b) Plug in connectors c) Address selector switches visible in 2 planes d) Approved to GEA GEI 1-082 and CEA GEI 1-084 e) Surface Mounting box	5.00	Each	5,060.00	25,300.00
6	Supply & installation of Addressable Control Output Module with accessories and with following features: a) Addressable Relay Module with dry contact output to activate auxiliary devices. b) Built in type identification. c) High noise immunity d) Operating Voltage: 15-32 Vdc e) UL Listed	6.00	Each	5,405.00	32,430.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
7	Supply & installation of Addressable Analogue Horn sounders and with following features: a) Addressable Horn Sounders shall be of general area coverage. b) Designed with dual front and rear sound paths, providing an 'all around' sound output - ideal for open area coverage. c) Powered directly from Panel. d) Rotary address switches e) Operating voltage: 24 Vdc f) UL Listed Cables and accessories: as required- 2 Core 1.5 sq mm armoured FRLS cable with suitable accessories. <b>Make : Notifier</b>	5.00	Each	43,700.00	2,18,500.00
8	Supply & laying of fire alarm cable 2 core, 1.5 Sq. mm armoured FRLS twisted cable with suitable accessories etc. complete as directed by Engineer-in-charge. <b>Make: Notifier</b>	800.00	R M	103.00	82,400.00
	<b>Total of part D - Smoke and fire Detection alarm</b>			₹	<b>11,00,610.00</b>
	<b>Part E - IT Networking</b>				
1	Supply and installation of CAT 6 Gig speed information outlets with dual face plates. Quantity of outlets are: 2nos. At each work stations, cubicles, rooms of PAs; 4 nos. in all cabins of GM, AGMs, conference rooms, ; location of the outlets to be finalised in consultation with engineer in charge. <b>Make: Tyco/D-Link/Molex</b>	200.00	Each	434.00	86,800.00
2	Supply, installation and termination of approved make telephone outlets RJ 11jack with dual face plate. Quantity of telephone jacks are: 2nos. at each work stations, cubicles; 4 nos. each in all cabins of GM, AGMs, conference rooms, rooms of PAs; location of the outlets to be finalised in consultation with engineer in charge.	200.00	Each	434.00	86,800.00
3	Supply, laying and termination of Cat 6 Gig speed - 4 Pair 24 AWG UTP Cable, 305m with cross member pair separator complete as required. Each box contain 305 mtrs. of cable etc. complete as directed by Engineer-in-charge.	50.00	Box	8,050.00	4,02,500.00
4	Supply, laying and termination of 2pair 0.5mm dia shielded PVC insulated Copper conductor Telephone wire conforming to latest Standards etc. complete as directed by Engineer-in-charge.	2200.00	R M	3.00	6,600.00
5	Supply, installation and dressing of Cat 6Gigaspeed Patch Panels for accommodating 24 port termination and shall facilitate cross-connection and inter-connection using modular patch cords and shall conform to EIA standard, 19-inch relay rack mounting requirements. Patch Panel shall come with preloaded information outlets. Panel shall have label holders and designation labels as part of the standard device. Shall also come with rear cable management metallic tray with Velcro ties complete as required etc. complete as directed by Engineer-in-charge.	11.00	Each	11,500.00	1,26,500.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6	Supply, installation and dressing of Cat 6Gigaspeed Mounting Cords 3'-0" length for the Patch Panel End Connectivity, Both end shall be RJ 45 with snag less boots complete as required. Make :D-Link or TYCO for all items covered at 1 to 6	230.00	Each	230.00	52,900.00
7	End terminations for telephone cables into junction boxes etc. complete as directed by Engineer-in-charge.	6.00	Each	1,495.00	8,970.00
8	Providing and fixing of Pigtails for Server.	11.00	Each	2,415.00	26,565.00
9	Providing and fixing of slicing of cores.	13.00	Each	1,092.00	14,196.00
10	Supply and fixing of fiber patch cards.	4.00	Each	5,750.00	23,000.00
11	Supply and fixing of Powder coated metallic race ways for tables in cabins and conference halls etc. complete as directed by Engineer-in-charge.	82.00	Each	575.00	47,150.00
12	Supply and fixing of 2 KVA online UPS system with all accessories with one hour back up etc. complete as directed by Engineer-in-charge. <b>Make: APC</b>	2.00	Each	51,175.00	1,02,350.00
	<b>Total of Part E - IT networking</b>			₹	<b>9,84,331.00</b>
	<b>Total value of work (Part A+Part B+Part C+Part D +Part E)</b>			₹	<b>1,76,27,991.98</b>
<b>Total : ₹ One crore seven six lakhs twenty seven thousand nine hundred ninety one and ninety eight paise only</b>					

**Note:** \*\*The required Cement, structural steel, MS reinforcement steel will be issue by BHEL on free of cost at BHEL stores.

1	A penalty of 0.5% of the gross value of work will be levied for every week's or part thereof delay of work subject to a maximum penalty of 10% of the gross value of work.
2	The rates are inclusive of VAT for all the items and all taxes and duties except Service tax, which is extra as per service tax norms will be paid by BHEL to the agency after submission of necessary documents

**Note :** The bidders are required to quote the tender value on percentage (%) basis at excess or less or on par with estimate value in figures and words.

Tender %	In figure	In words
Excess		
Less		
Estimated value		

Name of the Contractor :

Signature of the Contractor