



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

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-01/2011-12, Dt:- 07.04.2011

PRICE BID

Item no : 3

Name of work: Construction of second floor on North West side of Admn. Bldg.

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
	Part - A : Civil, Structural steel & Interior Works.				
1a	Design, supply and erection of self supported curved roof of Proflex systems/Tata bluescope /DRS roof tech with material (imported galvalume of BMT 1.09 mm and TCT 1.29mm having tolerance of +/-0.02mm and also the width of 914mm and tolerance +/-2mm) including fixing with bolts,nuts and washers complete in all respects.	715.00	Sqm	1,665.00	11,90,475.00
b	Supply and installation of hangers /clamp as per project requirement	50.00	Each	240.00	12,000.00
2a	Fabrication of structural steel work including all materials going into the process of fabrication and forming and integral form of steel work together with all shop and site rivets and electrodes for site welding as necessary and all site connections comprising sag rods, floor beams, girders, bracings, trusses and frame work for fixed false ceiling and for movable false ceiling, purlins with channel / angles, MS flat supports including all connections as per detailed drawings connected steel works etc., cleats, gusset plates, all bolts, nuts, washers, base plates, anchor bolts as per detailed drawings, cutting, welding and painting 2 coats of red-oxide primer before erection etc., complete. The rate shall include painting 2 coat of Red-oxide as per IS specifications and all charges for handling, leading and loading at the fabrication yard. The rate includes cost of electrodes, gasses etc., The raw structural steel sections will be issued FREE of cost at BHEL stores.	14.50	MT	7,563.80	1,09,675.10
b	Erection of Steel work out lined in item No.1 above including the charges for handling, leading and stacking at site at approved locations prior to erection including all site rivetting, bolting, jointing and site welding where ever required.	14.50	MT	3,241.60	47,003.20
3	Painting at site of all structural steel work with 2 coats of aluminium paint / synthetic enamel paint of approved shade to trusses, columns, girders, bracings etc., with aluminium paint or synthetic enamel paint as required etc., complete. The required paint only will be issued free of cost by B.H.E.L at their stores.	14.50	MT	596.50	8,649.25

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
4	Supplying and fixing plain PVC pipe of 200 mm dia of approved quality with specials, accessories and approved sealing /jointing compound on the exterior of the inserted portion of the fitting and fixing in position and joining to MS gutters, including cost of all materials, sealing compound, labour etc., for all heights complete	132.00	One RM	640.17	84,502.44
5	Providing and fixing in true horizontal level 600 mm x 600mm false ceiling system manufactured by M/s. Armstrong World Industries 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 centre to centre 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 microperforations, 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. Make: Armstrong	650.00	Sq.m	1,130.00	7,34,500.00
6	Brick work with FPS bricks of class designation 75 in superstructure above plinth level up to ground floor in all shapes and sizes in cement mortar 1:6.	88.50	Cu.M	2,357.40	2,08,629.90
7	Supplying & fixing of flush window frame with sides openable 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 centre 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 mitre 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.	79.00	Sq.m	4,046.00	3,19,634.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
	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. 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). 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. 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. MAKE: SHAKTI/AJANTHA OF NCLSECCOLOR				
8	Supply and fixing of aluminium partition with new anodised box - section of size 101.60 X 44.45 X 2 mm for verticals, Top & Horizontal and 63.50 X 38.10 X 2 mm for intermediate horizontal at spacing suiting to the site requirements as approved. Wherever doors are coming wooden runners are to be provided into box section. This includes grouting of the frame to the floor properly fixed at ends to walls, cost of aluminium section, labour etc; Complete. (The door opening shall be deducted for payment).	162.00	One sq.m	1,316.00	2,13,192.00
9	Half brick masonry with FPS bricks of class designation 75 in foundations and plinth in cement mortar 1:4 (1 cement : 4 coarse sand) - extra for providing and placing in position 2 nos. of 6mm dia MS bars at every third course of half brick masonry.	191.00	Sq.m	318.15	60,766.65
10	Supply & fixing of full height aluminium door with double leaf manual slide opening mechanism at main entrance in required size made out of anodised aluminum box section of size 44.50x47.50x2 mm for verticals, top and middle rails and 101.60x44.50x2 mm for bottom rail inclusive of supply & fixing of all aluminium fixtures and fittings suitable to the door sliding mechanism, handles, suitable locking arrangement etc. complete, wherever members are joined wooden runners are to be inserted in the box section. This includes grouting of rails/aluminum sliding sections to the floor properly etc. complete as directed by Engineer-in-charge. Providing & fixing of 12 mm toughened glass with rubber beading with screwless snap on clips etc. for top portion of the door frame of approximate size 3' x 2.5' on each door leaf and 12 mm thick "Novapan" particle board, exterior grade, laminated on both sides fixed to bottom portion of the door frame of approximate size 3' x 4.5' on each door leaf with rubber beading, screwless snap on clips etc. complete. (No. of door -1, door leaf - 2 Nos. and the approximate size of the door is 1.8x2.4 m - 2 Nos. & 1.2x2.1 m - 2 Nos.	2.50	Sq.m	4,000.00	10,000.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
11	Supply & fixing 5.5 mm thick plain / ground glass to the aluminium frame with rubber bedding screwless snap on clips etc. complete	1.50	Sq.m	668.00	1,002.00
12a	Vitrified flooring:Supplying and laying of vitrified tiles of brighter shades and marble design of Premium Quality (1st quality) in required texture, design and colour, for floors / skirting / cladding using vitrified tiles of size 600 x 600 mm ($\pm$ 5 mm), inclusive of cost of cutting, champering 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 etc. complete as directed by Engineer-in-charge. The cost of the tile shall be Rs. 60/- per S Ft. 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, making pockets for electrical, communication, network cables etc. complete in all respects.	650.00	Sq.m	950.00	6,17,500.00
b	-----do----- for Skirting	119.00	Rm	142.50	16,957.50
13a	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 -Upto 10.00 M level.	430.00	Sq.m	95.10	40,893.00
b	Cement Plaster to ceiling /walls with 12mm thick cement plaster finished with a floating coat of neat cement of mix 1:3 (1 cement : 3 fine sand) .	553.00	Sq.m	107.80	59,613.40
14a	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering ,shuttering, finishing and reinforcement ,including consolidation by vibrations for all works up to plinth level with 1:1½ :3 (1 cement : 1½ coarse sand : 3 graded stone aggregate of 20 mm nominal size).	30.00	Cu.M	3,732.00	1,11,960.00
b	----do ---for chajja .	17.10	Cu.M	3,732.00	63,817.20
15	Centering and shuttering including strutting, propping etc; and removal of form work, for columns, pillars,peirs,abutments,machine foundations, posts and struts.	480.00	Sq.M	180.40	86,592.00
16	Applying exterior emulsion paint 2 coats to external new plastered surfaces including curing etc., over a coat of primer (paint will be issued free of cost by BHEL at their stores).	430.00	Sq m	29.90	12,857.00
17	Applying two or more coats of distemper with oil bound washable distemper of approved brand and manufacture to given an even shade including preparation of the surface, cost of all labour, material and other incidentals including priming coat with cement primer.	553.00	Sq.m	41.60	23,004.80

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
18a	Dismantling brick masonry walls for all heights, removing and clearing the debries and carting away upto to lead of 2 KM including loading, unloading and spreading segregating useful materials as directed by Engineer-in-charge including the cost of all labour scaffolding etc., complete.	8.00	One Cu.m	355.88	2,847.04
b	-----do-----for brick Koba	66.50	One	355.88	23,666.02
19	Dismantling steel work in built up sections in angles tees, flats and channels including all guest plates, bolts, cutting rivets, welding etc., including dismembering and stacking within 50 metres lead.	8.00	One MT	890.11	7,120.88
20	Removing of corrugated / semi corrugated, A.C sheets including North Light curves barge boards etc., in roof, sides, gable ends, louvers etc., and stacking the materials carefully for re-use wherever required.	665.00	One Sq.m	41.60	27,664.00
21	Dismantling reinforced cement concrete / plain cement concrete and disposing of debries upto to a lead of 2 KM including loading, unloading and spreading as directed by Engineer-in-charge etc., complete.	1.00	One Cu.m	582.68	582.68
22	Supply and fixing 9 mm thick pre-laminated particle board both side laminated exterior grade fixed to frame with rubber beading screw less snap on clips etc., complete.	71.25	One sq.m	534.00	38,047.50
23	Reinforcment for R.C.C. work including straightening, cutting, bending, placing in position and binding grills with binding wire all complete by cold twisted bars.	3.80	M.T	42,700.00	1,62,260.00
24	Wall paneling: Supply & 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, Steam beige beading, nails, screws, sliding rollers/bearings, fevicol etc. complete. Supply and fixing of frame work with second class teak wood scantlings of size 50 x 25 mm as verticals and horizontals, at an interval of 600 mm c/c shall be made for fixing the Ecoboard. Joints and corners shall be covered with Steam beige beading of suitable sizes with malamine polish complete in all respects. Make : Eco board	1.00	Sq.m	1,600.00	1,600.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
25	Full height glass partitions for cabins: Supply and Fixing of aluminium full height /half height partitions with New Anodised aluminum box section powder coated in required colour, design and size of Box section 101.60 X 44.45 X 2 mm for verticals, top and Bottom horizontals at spacing suiting to the site requirements as approved. where ever doors are coming wooden runners are to be provided in box sections. The Rate shall include grouting of Frame to the floor properly fixed to at ends to walls, supply and fixing of 12mm Toughened glass in required sizes and colour . Supply and fixing of frosted film with specified design, size and make of "Birla 3M" etc; Complete.(the door opening shall be deducted for payment).The rate shall include labour, materials, nails, screws, clamps etc; complete.	144.00	Sq. m.	4,000.00	5,76,000.00
26	Glass Doors: Supply & fixing of full height aluminium door with single shutter in required size made out of anodised aluminium box section powder coated in required colour, design and size of box section 101.60 x 44.45 x 2.00 mm for verticals, top and bottom horizontals inclusive of supply and fixing of all aluminium fixtures and fittings. Wherever members are joined wooden runners are to be inserted in the box section for fixing hinges, tower bolts, handles, hydraulic door closure and providing necessary rubber beeding for smooth closing of door shutter complete as directed by Engineer-in-charge. Providing & fixing of 12 mm toughned glass for door frame and door hardware with DORMA make like floor spring, patch fittings, bottom locks, "D" handles, with specified design, size and frosted film of "Birla 3M" make, on glass complete in all respects.	13.50	Sq.m	4,000.00	54,000.00
			Part - A Total		49,27,012.56
	Part - B : Sanitary Fittings				
1	Supply and fixing of new urinary pans, "Parry ware" make, ceramic, Model (Cat 0575)- "New Magnum Urinal" (600 mm x 400 mm) along with all accessories, C.P 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, in regular colour etc., complete.	5.00	Each	3,933.00	19,665.00
2	Supply and fixing with "Parry ware" make Cascade series wash hand basin of size 550 mm x 450 mm oval shape with counter top with centre tap hole, regular in colour with all accessories like brackets, screws etc., complete .	5.00	Each	2,024.00	10,120.00
3	Supply & fixing of 6 mm thick mirror of approved quality "Modi float/Saintgobin glass", with 6 mm thick hard board back and with best quality teak wood frame (design beading) all round the mirror including necessary clamps, polishing to the beading, cost of all materials etc. complete.	9.00	One Sq.m	1,445.00	13,005.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
4	Providing and fixing shutters along with frames for toilets that are 30 mm thick factory made PVC rigid foam paneled, door and shutters manufactured by M/s. Rajashri made from M.S. tube, 19 gauge thick, size 19x19mm for styles and 15x15mm for top and bottom rails, covered with heat moulded PVC "C" channel of 5mm thick sheet and 30x50mm wide for styles and 5mm thick and 75mm wide PVC sheets for top rail and bottom rail either side and 5 mm thick, 20mm wide cross PVC sheet as gap insert for top rail and bottom rail, paneling of 5mm thick PVC sheet fitted with M.S. frame welded / sealed to the styles and rails with 5x30mm PVC sheet beading on either side and joined together with solvent cement adhesive etc. complete in all respects as per direction of engineer in-charge fixed to frames. This includes providing brass hinges, brass aldrops, brass tower bolts, brass handles and brass door stoppers (For W.C. and bathroom doors)	7.50	One Sq.m	1,830.00	13,725.00
5	Supply and fixing of toilet doors along with teak wood door frame of required size consist teak scantlings of 100 mm x 75 mm and flush door shutter and laminating both door frame and shutter with premium quality teak vineer in required colour and design and malamine 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.	3.60	One Sq.M	3,180.00	11,448.00
6	Supply & fixing "Jaquar" make urinal flushing valves for urinal pots in all accessories/Cat: 1077.	5.00	One Each	1,320.00	6,600.00
7	Supply & fixing "Marc" make oyster series brass bib cocks. With all accessories / Cat: MOY 1030.	5.00	One Each	506.00	2,530.00
8	Supply & fixing "Marc" make oyster series brass pillar cocks. (Cat: MOY 1010) with all accessories etc.	5.00	One Each	519.00	2,595.00
9	Supply & fixing "Marc" make oyster series brass stop cocks. (Cat: MOY 1040) with all accessories.	10.00	One Each	698.00	6,980.00
10	Supply and fixing of new "Parry ware" make Elite - European water closet of size 530 mm x 400 mm, with "P/S" trap including PVC Slimline Dual flush tank (Cistern) of size 475 mm x 318 mm (Code No. C8109), EWC standard seat cover (Cat C8071) with all accessories like Parryware flush kit suitable to the above flush tank, brackets, screws, connecting pipe from flush tank to EWC, PVC Connections etc. complete. Colour: Silky Off - White.	3.00	Each	2,000.00	6,000.00
11	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.	2.00	Each	4,261.00	8,522.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
12	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacture) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by engineer-in-charge in skirting, risers of steps and dados over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 Kg per Sq.m including poniting in white cement mixed with pigment of matching shade complete.	149.00	One Sq.m	556.80	82,963.20
13	Supply & fixing of 18 mm thick best quality approved colour and design 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.	42.40	sq.m	3,071.00	1,30,210.40
14	Supply & fixing in position PVC Pipes of 3" dia(as per IS 6kg/sq.m) of best quality for drainage lines / urinal / hand wash areas including chasing the brick wall, concrete etc and making good the same after fixing the same etc. complete.	35.00	One RM	108.70	3,804.50
15	Supplying and fixing CI Nahany traps 1st quality ISI marked conforming to IS: 1729 - 1979 with C.P Grating fixing with white cement as per site requirements with standard practice - 100mm inlet - 75 mm dia (3") outlet pipe - 4 Kgs.	4.00	One Each	200.00	800.00
16 a	Supply & fixing 15 mm dia Nominal Bore GI pipe medium Grade (CLASS B) properties and weight as per IS 1239 ISI mark with GI fittings including the cost of GI pipe & its fittings, chasing brick work/concrete and making good the same, cost of labour, all materials etc. complete. Make: TATA / JINDAL / ZENITH	30.00	One RM	131.00	3,930.00
(b)	.. Do... 20mm dia (3/4"), Make: TATA / JINDAL / ZENITH	40.00	One RM	146.00	5,840.00
(c)	.. Do... 25mm dia (1"), Make: TATA / JINDAL / ZENITH	60.00	One RM	191.00	11,460.00
(d)	.. Do... 80mm dia (3"), Make: TATA / JINDAL / ZENITH	80.00	One RM	458.15	36,652.00
17(a)	Supply & fixing of Gunmetal Gate (GM peet) valve as per IS -778 class-I, Indian make heavy type 15 mm (1/2") dia NB size. Make: Zoloto / Leader	4.00	One Each	242.00	968.00
(b)	.. Do... 20mm dia (3/4"), Make: Zoloto / Leader	4.00	One Each	327.00	1,308.00
(c)	.. Do... 25mm dia (1"), Make: Zoloto / Leader	4.00	One Each	482.00	1,928.00
(d)	.. Do... 80mm dia (3"), Make: Zoloto / Leader	2.00	One	1,369.25	2,738.50
18	Supplying, laying , jointing and testing 152.4 mm (6") SWG pipes of ISI make conforming to ISI 651 & 4127 with airtight cement joints in Cement mortor 1:5:1 prop. including excavation of trenches and socket pits in anysoil(except rock requiring blasting) up to 1524 mm(5'.0") depth and refilling with watering and tamping.	40.00	One RM	254.00	10,160.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
19	Construction of brick masonry chamber of dimension 0.914 x 0.457 x 0.914 m (3' x 1'6" x 3') with brick in CM 1:6 including plastering over both sides with CM 1:4, 20 mm thick and fitted with light weight CI frame and cover of size 0.914 x 0.457 m in CM 1:4 including bed concrete of CC 1:4:8 as required, supplying and fixing one CI steps in brick masonry if necessary including earth work excavation in all soils, refilling around the chamber removing the surplus earth etc. complete as directed.CI frame and cover of 40 kgs.	3.00	One Each	3,226.00	9,678.00
20	Construction of brick masonry chamber of size 23 x 30 Cm (9" x 12") in brick work in CM 1:6 and plastering in CM 1:4, 20 mm for gully trap 150 mmx100mm including cost of excavation, PCC 1:4:8, 75 mm thick, all materials, labour etc., complete.	2.00	One Each	321.00	642.00
21	Providing and placing on terrace (at all floor levels) of polyethylene water storage tank of 1000 ltrs capacity with double layer, " Sintex " make and manufacture as per ISI with cover and suitable locking arrangement and making necessary holes for inlet and outlet and overflow pipes with fittings (ballcock, inlet and outlet nipples) without base support for tank. (Brick work for base support will be paid seperately).	2.00	Each	6,000.00	12,000.00
22	Making connection of G.I distribution branch with G.I main of following sizes by providing and fixing tees, including cutting and threading the pipe etc. complete-for 25 to 80 mm nominal bores.	1.00	Each	423.20	423.20
23	Supplying and fixing P trap 1st quality ISI marked conforming to IS: 1729 - 1979 with C.P Grating fixing with white cement as per site requirements with standard practice - 100 mm dia (3") .	1.00	Each	447.00	447.00
			Part - B Total		4,17,142.80
	PART - C : AIR CONDITIONING WORKS				
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. MAKE: LG/VOLTAS/BATLIBOI/CARRIER/BLUE STAR	2.00 Nos.	Each	3,45,000.00	6,90,000.00
2	Supply, installation, testing & Commissioning of 1.8 TR cassette air conditioner comprising indoor unit, outdoor unit with electronic control with remote control pad, necessary cabling, DB's, switches, inclusive of all connected accessories etc for conference hall, complete in all respects. MAKE: DAIKIN	1.00 No.	Each	83,375.00	83,375.00
3	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. MAKE: LG/VOLTAS/BATLIBOI/CARRIER/BLUE STAR	3.00 Nos.	Each	25,000.00	75,000.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
	Note: All out door Air conditioner units and compressor units shall be located on the terrace/on chajjas of the building, whichever is feasible.				
4	Supply, installation, testing & Commissioning of following piping / ducting for Air Conditioning units Copper refrigerant piping with insulation foam between indoor and outdoor air cooled condensers of the following sizes. Hard drawn pipe 28mm dia	60.00 R M	One R M	989.00	59,340.00
5	12mm dia	60.00 R M	One R M	661.00	39,660.00
6	Soft drawn pipe 12.5mm dia	30.00 R M	One R M	402.00	12,060.00
7	6.5mm dia	30.00 R M	One R M	276.00	8,280.00
8	GSS ducting complete with angle iron flanges, high tech supports as per SMACNA specification 20 gauge	20.00 Sq. m	One Sq. m	1,207.00	24,140.00
9	22 gauge	20.00 Sq. m	One Sq. m	1,053.00	21,060.00
10	24 gauge	120.00 Sq. m	One Sq. m	862.00	1,03,440.00
11	The acoustic lining in the duct using fibre glass with 26 g aluminum perforated sheet using GI nuts and bolts. 12.5mm thick	20.00 Sq. m	One Sq. m	287.00	5,740.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
12	Providing Thermal Insulation with 25mm thick fibre glass crown 150mm covered with aluminum foil.	120.00 Sq. m	One Sq. m	615.00	73,800.00
13	MS black coated Collar Dampers	10.00 Sq. m	One Sq. m	21,804.00	2,18,040.00
14	Main duct Volume control dampers made out of 18 gauge GI sheet.	1.00 Sq. m	One Sq. m	12,075.00	12,075.00
15	Fire retardant flexible canvas connection	2.00 Nos.	Each	483.00	966.00
16	Condensate drain pipe of standard make PVC with insulation of 50mm dia	50.00 R M	One R M	115.00	5,750.00
17	Power and control cabling between the panel, indoor unit and out door unit of the following sizes 3c 1.5 SQ.MM	200.00 R M	One R M	57.00	11,400.00
18	3c 2.5 SQ.MM	200.00 R M	One R M	60.00	12,000.00
19	Mounting both indoor & outdoor units, pressure testing, vaccumising and commissioning etc. of Duct able a/c unit	3.00 Nos.	Each	10,925.00	32,775.00
20	Mounting of in door and out door Hi-wall split unit	12.00 Nos.	Each	5,175.00	62,100.00
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. Required MS channels/angles shall be supplied by BHEL on free of cost.	3.00 Nos.	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.	30.00 Nos.	Each	1,840.00	55,200.00
24	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.	30.00 Nos.	Each	1,403.00	42,090.00
	Note: i. Air balancing to be carried out to show anywhere in the area $24\pm 2^{\circ}\text{C}$ in peak summer also. Note: ii. Energy Meter for total load (lighting, A/C etc.) of the floor shall be provided.				
			Part-C:Total Rs.		16,70,206.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
	PART - D : ELECTRICAL WORKS				
1	Cable Raceways 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.	50.00 R M	One R M	661.00	33,050.00
2	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	300.00 R M	One R M	431.00	1,29,300.00
3	--do-- 56 x 38 mm	100.00 R M	One R M	374.00	37,400.00
4	Supply & Installation of floor junction boxes with top cover for above raceways, of size 300mm x 300mm x 50mm /150x150x50 mm fabricated out of MS painted sheets with removable screwed cover plates on all four sides for blocking the entry complete in all respects. Make : Locally fabricated	100.00 Nos.	Each	546.00	54,600.00
5	Supply, Installation and commissioning of MAIN LT PANEL , 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 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	1.00 Set	One Set	74,750.00	74,750.00
	This includes termination of the cables, end terminators, material, labour, commissioning etc. complete.				

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
6	Supply, Installation and commissioning of UPS OUTGOING PANEL, floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-drawout, 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	1.00 Set	One Set	66,890.00	66,890.00
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. Make : Siemens/Legrand/Hager	1.00 Set	One Set	12,334.00	12,334.00
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. Make : Siemens/Legrand/Hager	1.00 Set	One Set	9,344.00	9,344.00
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, inter connected 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. Make : Siemens/Legrand/Hager	1.00 Set	One Set	10,988.00	10,988.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
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 Make : Siemens/Legrand/Hager	1.00 Set	One Set	3,910.00	3,910.00
11	CABLES / MAINS Supply & Installation of 1100V grade FRLS armoured cable having sector / circular shaped 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 flexible cable in suitable size of PVC Conduit.	50.00 R M	One R M	3,450.00	1,72,500.00
12	Supply & laying of 4C x 70 SQ.MM. copper armoured flexible in suitable size of PVC Conduit.	20.00 R M	One R M	2,000.00	40,000.00
13	Supply & laying of 4C x 16 SQ.MM Copper armoured cable.	20.00 R M	One R M	1,035.00	20,700.00
14	Supply & laying of 4C x 10 SQ.MM copper cable.	50.00 R M	One R M	690.00	34,500.00
15	Supply & laying of 4C x 6 SQ.MM copper cable.	20.00 R M	One R M	517.00	10,340.00
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. 4C x 120 SQ.MM copper armoured flexible	2.00 Nos.	Each	1,380.00	2,760.00
17	4C x 70 SQ.MM. copper armoured flexible	2.00 Nos.	Each	920.00	1,840.00
18	4C x 16 SQ.MM Copper armoured flexible cable	2.00 Nos.	Each	747.00	1,494.00
19	4C x 10 SQ.MM copper cable	2.00 Nos.	Each	747.00	1,494.00
20	4C x 6 SQ.MM copper cable	2.00 Nos.	Each	575.00	1,150.00
21	WIRING 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.	40.00 Nos.	Each	1,087.00	43,480.00
22	Supply & installation of above for Secondary light points looped from the above point.	50.00 Nos.	Each	385.00	19,250.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
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.	1.00 No.	Each	2,760.00	2,760.00
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. 25 to 26 (Separate rate is not required to be quoted for item No.24)				
25	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.	300.00 R M	One R M	172.00	51,600.00
26	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.	1500.00 R M	One R M	144.00	2,16,000.00
27	Supply & fixing of 6A/16A Plug Point directly taken from DB for Pantry/geyser / zerox / fridge/ split AC units.	20.00 Nos.	Each	920.00	18,400.00
30	Supply and installation of 6A, 5 pin 4 nos. shuttered type sockets controlled by 1no. 16A switch with suitable size of front plate etc. (UPS POWER set); Quantity of outlets are: 4nos.; location of the points will be finalised in consultation with engineer in charge, complete in all respects. Make: ROMA OF ANCHOR	60.00 Nos.	Each	1,552.00	93,120.00
31	Supply and installation of one no 6A/16A 5pin shuttered type sockets controlled by 1no. 16A switch with suitable size of front plate etc. (RAW POWER set) Make: ROMA OF ANCHOR	40.00 Nos.	Each	920.00	36,800.00
32	EARTHING 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.	2.00 Nos.	Each	24,150.00	48,300.00
33	Supply and installation of copper wire/strips in following sizes 14 SWG copper bare wire	100.00 R M	One R M	57.00	5,700.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
34	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.	50.00 R M	One R M	172.00	8,600.00
35	Supply and installation of 6 sqmm, cu in 20mm PVC flexible conduit.	100.00 Nos.	Each	86.00	8,600.00
36	LIGHTING FIXTURES 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.	80.00 Nos.	Each	5,175.00	4,14,000.00
37	Supply & Installation of Recess mounted down lighter luminaries with specular finish reflector 2 x 18 W CFL Cat No Philips make:FBH145/218.	10.00 Nos.	Each	2,300.00	23,000.00
38	Supply & Installation of Occupancy sensors with bypass facility for Cabins. This includes wiring from sensor to board and supply of required accessories. Make : Philips/Wipro/Steinel	10.00 Nos.	Each	6,325.00	63,250.00
			Part : D Total Rs.		17,72,204.00
	PART - E : IT NETWORKING				
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.	100.00 Nos.	Each	434.00	43,400.00
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.	100.00 Nos.	Each	434.00	43,400.00
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.	30.00 Boxes	Each Box	8,050.00	2,41,500.00
4	Supply, laying and termination of 2pair 0.5mm dia shielded PVC insulated Copper conductor Telephone wire conforming to latest Standards.	6000.00 R M	One R M	3.00	18,000.00

SI No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
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.	6.00 Nos.	Each	11,500.00	69,000.00
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	60.00 Nos.	Each	230.00	13,800.00
7	Documentation, testing certification included project management complete as required.	1.00	LS	11,500.00	11,500.00
8	End terminations for telephone cables into junction boxes.	2.00 Nos.	Each	1,495.00	2,990.00
9	Providing and fixing of Pigtails for Server.	4.00 Nos.	Each	2,415.00	9,660.00
10	Providing and fixing of slicing of cores.	4.00 Nos.	Each	1,092.00	4,368.00
11	Supply and fixing of fibre patch cards.	2.00 Nos.	Each	5,750.00	11,500.00
12	Supply and fixing of Powder coated metallic race ways for tables in cabins and conference halls in required sizes.	20.00 Nos.	Each	575.00	11,500.00
13	Supply and fixing of 1 KVA online UPS system with all accessories with one hour back up. Make: APC	1.00 No.	Each	51,175.00	51,175.00
			Part-E: total Rs.		5,31,793.00
	Total Value of work(Part-A+Part-B+ Part-C + Part-D +Part-E)			Rs.	93,18,358.36
Total : Rs. Ninty three lakhs eighteen thousand three hundred fifty eight only.					

Service Tax:- Service Tax is extra as applicable, which will be reimbursable to the agency on production of valid documents and VAT not applicabel.

MAKE OF MATERIALS TO BE USED IN JOB WORK

Sl. No.	Description of Materials	Name of Make
1	Wires	Finolex / L&T
2	Telephone Wire	Finolex / L&T
3	Telephone Socket	Roma / Cabtree
4	Cable	Finolex / L&T
5	Modular Switch & Socket	Roma / Cabtree
6	Distribution board	AGER / GE / SIEMENS
7	MCB/ELCB	AGER / GE
8	MCCB	AGER / GE
9	Measuring Instrument	Conzerve
10	CT (Tape wounded)	Kappa
11	Indicating lamp	L&T / SIEMENS
12	Selector Switch	Kaycee
13	Light fixtures	Philips
14	Exhaust Fan	Crompton
15	Flourescent Tubes	Philips
16	Crimping/Soldering	Dowels/Braco
17	Terminal Connectors	Wago
18	PVC Pipe	Sudhakar
19	Insulation Tapes	Steelgrip
20	Data Cable	D-Link/Krone
21	Data Socket	D-Link/Krone
22	Panel	CPRI Approved Panel Manufacture
23	Raceways	Aluminium

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

Tender %	In f igure	In words
Excess		
Less		
Estimated value		

Name of the Contractor :

Signature of the Contractor

Accounts Representative

Opening officer