

**NAME OF WORK : PROPOSED INTERNAL ELECTRICAL WORK OF SETTING UP AN AUDITORIUM AT
OPEN SPACE OF MEZZANINE FLOOR, LOCAL HEAD OFFICE BUILDING,**

BOQ FOR ELECTRICAL WORK

Sl. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
				In Figure	
1	<p>POINT WIRING :</p> <p>Providing point wiring (supply, fixing, testing and comm. etc) for light point / Exhaust fan point / Call bell point / Ceiling fan point i/c fan box (if required) etc with 3 x 1.5 sq mm (phase neutral and earth) FRLS PVC insulated copper conductor single core multi stranded wire in HMS conduit with conduit accessories like bend , junction box etc in concealed manner with suitable Modular Switches with plate and metal box / from MCB (as mentioned in item), 3 plate ceiling rose / bulb holder etc including circuit wiring of 3 X 2.5 sq mm FRLS PVC insulated copper conductor single core multi stranded wire in 16 swg stove enamelled rigid steel conduit from MCB distribution board to switch box etc complete as required.</p> <p>Phase : Red, Yellow,Blue. Neutral : Black. Earth : Green .</p>				
	a. Providing and fixing one light point controlled by one switch.	108	Nos.		
	a. Providing and fixing five to six light point (Loop Point- First point 10-18 meter and others 3-4 meters distance) controlled by MCB from distribution board..	50	Nos.		
	b. Providing and fixing one CEILING FAN POINT controlled by followings : i one no switch ii one no stepped electronic regulator (two Module) as required.	10	Nos		
2	<p>6 AMP. POINTS ON SAME BOARD :</p> <p>Supply,fixing,testing and commissioning of 1 No 6A Multi Socket with 1No. 6 A switch (Modular type) with cover plate , sheet steel box / PVC modular box etc in concealed manner l/c electrical connections and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed.</p>	10	Nos		
3	<p>6 AMP. POINTS ON SEPARATE BOARD :</p> <p>Supply,fixing,testing and commissioning of 1 No 6A Multi Socket with 1No. 6 A switch (Modular type) with cover plate , sheet steel box / PVC modular box etc in concealed manner l/c electrical connections and making good all the damages, painting, cleaning</p>				

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	the site etc including circuit wiring of 3 X 1.5 sq mm FRLS PVC insulated copper conductor single core multi stranded wire in HMS conduit i/c conduit accessories from MCB distribution board to switch box etc complete as required.	4	Nos		
4	<p>6 / 16 AMP. POWER POINTS:</p> <p>Supply, fixing, testing and commissioning of 1 No 16 A switch & 1 No. six pin 6/16 Amp. Multi Socket (Modular Type) with cover plate , sheet steel box etc in concealed manner i/c electrical connections and making good all the damages, painting, cleaning the site etc including wiring with 3 X 4 sq mm FRLS PVC insulated copper conductor single core multi stranded wire in HMS conduit i/c conduit accessories from MCB distribution board to switch box etc complete as required.</p>	12	Nos		
5	<p>AC / GEYSER POWER POINTS :</p> <p>Supply, Installation, Testing and commissioning of the concealed mounting A.C. / GEYSER point with the followings :</p> <p>a. 32 A D.P.,1 way switch with neon with plate and box.- 1 set</p> <p>b. 25 A & 10 A Twin socket with plate and box.- 1 Set. i/c electrical connections and making good all the damages, painting, cleaning the site with 2 x 6.0 +1 x 4 sq mm FRLS PVC insulated copper conductor single core multi stranded wire HMS conduit with conduit accessories in concealed manner etc complete as required. MCB distribution board to switch box etc complete as required.</p>	4	Nos		
6	<p>SPECIAL ELECTRICAL POINTS : (For LED TV)</p> <p>Supply, Installation, Testing and commissioning of the concealed mounting UPS modular type power point for computers with the followings :</p> <p>a. 2 Nos. 10 A Switch + 3 Nos. 10 A, 3 pin Socket - 1 set i/c electrical connections and making good all the damages, painting, cleaning the site with 3 x 2.5 sq mm FR PVC insulated copper conductor single core multi stranded wire in HMS conduit</p>				

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	with conduit accessories in concealed manner from MCB distribution board to switch box etc complete as required as directed.	10	Nos.		
7	<p>SUB-MAINS WIRING :</p> <p>Supplying, providing wiring (supply, fixing, testing and comm.etc) for Light / Power with following FRLS PVC insulated copper conductor single core multi stranded wire in HMS conduit i/c conduit accessories in concealed manner with electrical connections and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed.</p> <p>a. 3 X 6.0 sqmm (For SPN DB) in 20 mm steel conduit.</p>	100	Mtrs		
	b. <i>3x2.5 sq.mm</i>	100	Mtrs		
	c. <i>6x2.5 sq.mm</i>	100	Mtrs		
	d. <i>4x6 sq.mm + 1x4 sq.mm(main Submain wire)</i>	100	Mtrs		
	e. <i>1x 1.5 sq.mm wire for inverter wiring(Grey in Colour)</i>	200	Mtrs		
8	Supply and fixing of 'S' type / Clamp type fan hook in the ceiling by cutting / chisling , replastering ,painting etc complete as required.	10	Nos.		
9	<p>MCB's DISTRIBUTION BOARDS :</p> <p>Supply, Installation, Testing and commissioning of surface / recess mounting following ways MCB DB's 230 / 415 Volts on surface/recessed, complete with tinned copper busbar, neutral bar, earth bar, din bar detachable gland plate, interconnection and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed.</p> <p>A. LIGHT DISTRIBUTION BOARD :</p> <p>a. 1 no. TPN MCB DB 6 way (4 + 18 ways)</p> <p>b. 1 no TPN MCB 32 amp.</p> <p>c. 18 nos SP MCB 06-32 amp.</p>	4	Nos.		
	<p>B. POWER DISTRIBUTION BOARD :</p> <p>a. 1 no. TPN MCB DB 6 way (4 + 18 ways)</p> <p>b. 1 no TPN MCB 63 amp.</p> <p>c. 18 nos SP MCB 06-32 amp.</p>	2	Nos.		

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	<p>C. SPN POWER DIS.BOARD (For UPS and VRF AC Indoor units) :</p> <p>a. 1 no.SPN MCB DB 12 way (2 + 12 ways) b. 1 no SPN MCB 63 amp. c. 12 nos SP MCB 10 amp.</p>	2	Nos.		
	<p>D. SPN DISTRIBUTION BOARD (for UPS IN PUT) :</p> <p>a. 63 A SPN MCB – 1 no. b. 1 No Fabricated 18 swg m.s.box of suitable size OR factory made.</p>	2	Nos		
	<p>E. VERTICAL DB (Double door) :</p> <p>Supplying and fixing of following 6 Way three pole and neutral, sheet steel Vertical MCB distribution board , 415 volts on surface / recess, complete with tinned copper busbar , neutral bar, earth bar , din bar , detachable gland plate with Cable termination box, interconnection including painting,earthing etc as required,With the followings -</p> <p>a. 01 no. 125 amp., 10 KA , TP MCCB b. 63 A TP MCB - 5 Nos. c. 63 A SP MCB - 3 Nos.</p>	1	Set		
10	<p>TELEPHONE POINT :</p> <p>Supplying, Installation, testing and commissioning of the telephone point with the followings - 1 No Double outlet with shutter modular type Telephone Outlets (RJ-11) with suitable size M.S.modular boxes in concealed manner including two pair 0.50 mm dia.tinned copper conductor, P.V.C. insulated and sheathed , fire retarding, anti termite colour coded twisted pairs with rip cord telephone cable in 1.5 mm thick PVC conduit with conduit accessories in concealed / surface manner complete as required.</p>	2	Nos		

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11	Supplying and fixing of krone telephone tag block, suitable for the multi core telephone cable and shall accommodate tin-plated phosphor bronze connectors, the connectors shall splice unskinned cables up to 0.61 mm dia and shall be terminate both incoming and out going lines, the tag blocks shall be mounted inside, water proof box and locking arrangement and shall be fully accessible. The item is inclusive of providing and fixing of boxes in surface / recessed system etc complete as required.				
	a. 20 pair tag block	1	Nos.		
12	Supply, Installation, Testing and Commissioning of 24 Port (100 base TX) Cat-6 Patch / jack panel with connectors, outlets and necessary connectivity complete as required.	1	Nos.		
13	Supply and Installation of following factory fabricated patch cords (UTP-CAT 6) complete with connectors on both sides.				
	a. One Meter length.	10	Nos.		
	b. Two Meter length.	8	Nos.		
14	INFORMATION OUTLETS : Supply and fixing of modular type Information Outlets with suitable size M.S./ PVC modular boxes complete with insulation displacement connectors etc suitable for CAT 6 UTP Cabling including Four Pair UTP CAT 6 LAN cables with RJ-45 connector if req with suitable size of 2.0 mm wall thickness rigid PVC conduits with accessories like bend / junction box etc on surface / in floor / recessed manner and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed.				
	a. One Port.	8	Nos.		
15	Supply, Installation, Testing and Commissioning of the following 10 / 100 Mbps Rack mounted Switch (Auto managed) suitable for auto-sense the network speed of the connected nodes to run at either 10 Mbps or 100 Mbps. The port also auto negotiate between full / half duplex and cable cross over.				
	a. 24 RJ-45 10 base –T / 100 Base – TX port.	1	Nos.		

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16	Supply, Installation, Testing and Commissioning of the following Rack on existing wall / table / platform etc i/c fixing of equipment/ accessories etc as required. a. 6 U Rack.	1	Nos.		
17	Testing of STP cabling with scanner for all the Nodes.	1	Nos.		
18	LED LUMINAIRES : Supply,Installation, testing and commissioning of recessed mounted LED light fitting (600 x 600 mm) suitable for grid ceiling complete as required. a. 36 X 1 Watts class LED fitting	6	Nos.		
19	LED DOWN LIGHTER : (ROUND) 2700K to 4000K Supply,,Installation testing and commissioning of recessed mounted circular down lighter complete as required.dia should not less than 150 mm. a. 15 Watts class LED (3000K) b. 32 Watts class LED (Warm-2700K to 3000k) c. 20/22 Watts class LED (Warm-2700K to 3000K) d. 20/22 Watts class LED (3500K to 4000K)	15 50 36 10	Nos Nos Nos Nos		
20	LED DOWN LIGHTER : (SQUARE) Supply,,Installation testing and commissioning of recessed mounted circular down lighter complete as required. a. 14 Watts class LED	10	Nos		
21	20 W LED 4 FT TUBE LIGHT FITTING : Supply,,Installation testing and commissioning of 20 Watts 4 ft tube light fitting	8	Nos		
22	WALL MOUNTED FAN WITH METALIC BLADE : Supply , Installation,testing and commissioning of the single phase heavy duty grease filled double ball bearing, aerodynamically designed heavy gauge aluminium blades, copper wounded and impregnated silicon stamping motor etc. a Almonard Air Circulated 600mm Dia. (24 Inch) (Make: Crompton Greaves/Almonard/Havells ES 50)	8	Nos.		

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23	<p>EXHAUST FAN :</p> <p>Supply, installation, testing and commissioning of the following single phase Exhaust Fan continuously rated, capacitor start and run type, totally enclosed and ruggedly built, pre lubricated double ball bearing, copper wounded, A & E class insulation, dynamically balanced, below 40 db sound level etc.with adjustable louvers.</p> <p>a. 300 mm sweep, 900 r.p.m. exhaust fan. (Make: Crompton Greaves/BAJAJ/Havells)</p>	6	Nos.		
24	<p>OCCUPANCY SENSOR :</p> <p>Supply, installation, testing and commissioning of high performance, non regulating PIR occupancy sensor complete as required.</p>	2	Nos.		
25	<p>DECORATIVE LIGHT(UP & DOWN BOTH FACE FACE FOCUS) :</p> <p>10/15 Watt Decorative Picture Light as directed by Bank/Architect. Sample approved by Architects</p>	16	Nos.		
26	<p>LED COVE/ STRIP LIGHT WITH ITS ELECTRONIC DRIVER(BLUE COLOUR):- Supply, installation, testing and commissioning of bright LED strip light with its electronic driver complete as required. PHILIPS, WIPRO, HAVELLS, CG, BAJAJ</p>	250	RM		
27	<p>STAIR STEP LED FOOT LIGHT FIXTURE:- Supply, installation, testing and commissioning of 2 modular Aluminium embedded stair step 3 W out door / indoor LED foot light, water proff lamp , style modern. Material : Metal, colour - Warm white complete as required. PHILIPS, WIPRO, HAVELLS, CG, BAJAJ</p>	125	Nos		

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28	<p>STREET LIGHT :</p> <p>LED Skyline 30W LED Street Light, IP-65 Outdoor Light (Black, Rectangle): Package Includes: 1 Piece of 30 Watt street Light, ROBUST DESIGN - The light quality combined with an incredible durable fixture makes this product perfect for outdoor application. Our street light has an IP65 rating which protects against strong rainfall without causing damaging or corrosion to the fixture. Energy Efficient - This LED Flood light offer high effective lighting with low consumption, save up up 60% of energy compared with traditional lighting fixture. High purity Polycarbonate cover with integrated optics for superior performance. Complete assembly with LED, Driver with extended pre- wired outside the luminaire and Virtually maintenance free. Color: Black, Shape: Rectagular, Material: Aluminum, Finish Type: Powder Coated. Make: PHILIPS, WIPRO, HAVELLS, CG, BAJAJ. Note:- 1). Sample approved by Architects or Engg. In-Charge. 2). Including electrical cable as required for light fixture, length of approx. DB to fixtures approx. 60.0 Meter. 3). Including On & Off by Waterproof Junction Box with required MCB.</p>	6	Nos.		
29	<p>A. CABLING :</p> <p>Supplying, unloading, storing , laying, testing and commissioning of following sizes of PVC / XLPE insulated (Heavy duty) Al / Cu conductor armoured cables suitable for working voltage upto and including 1100 Volts , laid and tied on existing overhead cable trays; or laid and tied over MS supports in masonry trenches including providing MS supports and clamps for fixing to supports ; or buried in ground complete as required and as per specifications. Note:- Including Crimping type lugs as per suitable for following sizes of cables with Alu. / Copper Solid/Strandard conductor evently crimped with high/pressure tools ans completed to switch gear/Bus/MCCB/MCB etc.</p> <p>including cable END termination with lugs and glande.</p>				
	a. 3.5 C x 25 Sqmm Ar. XLPE Cable.	147	RM		
	b. 4 C x 16 Sq mm Ar. XLPE Cable.	150	RM		
	c. 3.5 C x 95 sq mm Al. Ar. XLPE Cable.	215	RM		

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30	Cable tray :Perforated Type Supply and erection of hot dip G.I. cable tray perforation not more than 17.5% for specific dimensions along with tees, bends. The cable tray shall be hang from ceiling/ fixed to wall with necessary angle/flat iron/ hanging rod, for ceiling suspensions, clamp,anchor fastener,nuts,bolts, washers, not more than 1.0 mtr. apart complete as per specification to complete the job. The tray shall be as follows :- a. 300 x 50 x 2mm thick (14 SWG-Approx.2.0mm thk.) b. 400 x 50 x 2mm thick (14 SWG-Approx.2.0mm thk.)				
		40	RM		
		20	RM		
31	<u>G.I.PLATE EARTH STATION :</u> Preparation of the Plate Earth Station: (as per IS:3043) (a) Excavation of rocky earth, soft murrum, hard murrum etc and back filling with black cotton soil for the earth station, the earth pit size is 1000 mm x 1000 mm x 2500 mm deep. (b) S/F of G.I. plate of size 600 x 600 x 6.0 mm thick. (c) S/F fixing 50 mm x 6 mm, 3 mtrs G.I, strips from G.I.plate to earth terminal including brazing / welding at plate etc. (d) Supplying and laying in position 19 mm, 2 mtrs G.I. `B' class pipe for watering.with reducer/funnel with mesh. (e) S/F of the following in the earth station. (i) 75 Kg. Charcoal. (ii) 15 Kg. Original Salt. (iii) Black Cotton soil of adequate amount. (f) Construction of earth pit chamber including necessary brick work concrete, plastering, S/F of C.I. Cover of size 12" x 12" complete as per site req.and marking its value and identification etc.				
		3	Nos.		

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32	Providing and fixing GI strip as per specification complete including connection to earth electrode revetting / sweating / soldering, burying 15 cms below in all types of soil / rocks etc complete as required.				
	a. G.I.Strip 25 X 5 mm	100	Mtrs.		
	b. Providing & fixing 6 SWG dia G. I. wire on surface or in recess for loop earth as required.	200	Mtrs.		
	c. Supply and laying of 10 Sq.mm 650V/1100 V PVC grade insulated copper wire in 15 mm G.I. Pipe ISI grade including all accessories complete as required.(Dedicated Earthing for UPS output DB only)	100	Mtr.		
33	<p>MAIN L.T.PANEL :</p> <p>Supplying, installation, testing and commissioning of indoor type , sectionalised, compartmentalized, extensible cubicle type MV Panel board of suitable size fabricated from CRCA sheet of 2 mm thick for frame work, enclosure and doors, 3 mm thick for gland plates with stiffers where required, having vibration free structure chemically treated with seven tank process before painting for surface treatment and powder coated,aluminum busbar of high conductivity with DMC / SMC busbar supports suitable for 3 Phase 415 V 50 Hz AC supply with short circuit withstand capacity of 31 MVA for 1 Sec. fabrication shall be done in transportable sections,bottom base channel of MS section not less than 100mmx 50mm x 5mm thick,entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos. earth stud, i/c providing and fixing the following switchgear mounted thereon complete with gaskets and interconnections, connection as per specification complete as required.(The board shall be dust & vermin proof with suitable degree of IP protection) (The depth of Panel should not be less than 0.40 Mtr.) NOTE : All switchgears Ics shall be equal to 100% Icu.</p>				

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	<p>A. INCOMING SWITCHGEARS :</p> <p>1 No.- 200 Amp.25 KA, TP MCCB with N- link.with Thermal magnetic trip unit.with A digital Ammeter with suitable CT's.</p> <p>i. 1 No. 3 Ph Multi function meter class 0.5 with RS 485 port.</p> <p>ii. 4 Nos. 200 / 100 / 5 Amps. C.T. for metering.</p> <p>iii. 3 Nos. 250V Phase Indicating lamp with MCBs.</p> <p>B. BUS - BAR :</p> <p>4 Nos.250 Amp.Electrolytic grade Aluminum Bus Bars insulated with colored Heat Shrinkable PVC Sleeves & duly supported on SMC/DMC molded supports.</p> <p>C. OUTGOING SWITCHGEARS :</p> <p>a. 1 No.- 160 Amp.25 KA, TP MCCB with N- link.with Thermal magnetic trip unit.</p> <p>b. 9 No. - 63 Amp. 18 KA, TP MCCB with N- link. with Thermal magnetic trip unit.</p> <p>Note :- All MCCB's shall be provided with rotary operated mechanism and padlocking</p>	1	Nos.		
34	<p>AIR-CONDITIONING L.T.PANEL :</p> <p>Supplying, installation, testing and commissioning of indoor type , sectionalised, compartmentalized, extensible cubicle type MV Panel board of suitable size fabricated from CRCA sheet of 2 mm thick for frame work, enclosure and doors, 3 mm thick for gland plates with stiffers where required, having vibration free structure chemically treated with seven tank process before painting for surface treatment and powder coated,aluminum busbar of high conductivity with DMC / SMC busbar supports suitable for 3 Phase 415 V 50 Hz AC supply with short circuit withstand capacity of 31 MVA for 1 Sec. fabrication shall be done in transportable sections,bottom base channel of MS section not less than 100mmx 50mm x 5mm thick,entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos. earth stud, i/c providing and fixing the following switchgear mounted thereon complete with gaskets and interconnections, connection as per specification complete as required.(The board shall be dust & vermin proof with suitable degree of IP protection) (The depth of Panel should not be less than 0.40 Mtr.) NOTE : All switchgears lcs shall be equal to 100% lcu.</p>				

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	<p>A. INCOMING SWITCHGEARS :</p> <p>1 No.- 200 Amp.25 KA, TP MCCB with N- link.with Thermal magnetic trip unit.with A digital Ammeter with suitable CT's.</p> <p>i. 1 No. 3 Ph Multi function meter class 0.5 with RS 485 port.</p> <p>ii. 4 Nos. 200 / 100 / 5 Amps. C.T. for metering.</p> <p>iii. 3 Nos. 250V Phase Indicating lamp with MCBs.</p> <p>B. BUS - BAR :</p> <p>4 Nos.250 Amp.Electrolytic grade Aluminum Bus Bars insulated with colored Heat Shrinkable PVC Sleeves & duly supported on SMC/DMC molded supports.</p> <p>C. OUTGOING SWITCHGEARS :</p> <p>a. 10 No.- 63 Amp.18 KA, TP MCCB with N- link.with Thermal magnetic trip unit.</p> <p>Note :- All MCCB's shall be provided with rotary operated mechanism and padlocking</p>	1	Nos.		
35	<p>Supplying, installation, testing and commissioning of the following switch gears in 16 swg metal box complete with gaskets and interconnections, connection as per specification complete as required.(The board shall be dust & vermin proof with suitable degree of IP protection) (The depth of Panel should not be less than 0.40 Mtr.)</p> <p>NOTE : All switchgears Ics shall be equal to 100% Icu.</p> <p>a MCCB - 200 Amps, 4 Pole - 1 Nos</p> <p>Note :- All MCCB's shall be provided with rotary operated mechanism and padlocking</p>	1	Nos.		

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36	<p>Supplying, installation, testing and commissioning of the following switch gears in 16 swg metal box complete with gaskets and interconnections, connection as per specification complete as required.(The board shall be dust & vermin proof with suitable degree of IP protection) (The depth of Panel should not be less than 0.40 Mtr.)</p> <p>NOTE : All switchgears Ics shall be equal to 100% Icu.</p> <p>a MCCB - 200 Amps, 4 Pole - 3 Nos</p> <p>b Manual Change over Switch-200 Amp 4 Pole - 1 No</p> <p>c Energy Meter with suitable CT (4 Nos) - 1 No</p> <p>d 1 set of Ammetr and Voltmeter</p> <p>Note :- All MCCB's shall be provided with rotary operated mechanism and padlocking</p>	1	Nos.		
TOTAL :					

Rs.

GST to be paid additionally