

**BOQ OF ELECTRICAL WORKS FOR STATE BANK OF INDIA BRANCH AT
KARAMPURA, NEW DELHI.**

S.No	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
1(A)	Wiring for light point/ fan point/ wall fan point/ exhaust fan/ light sockets etc. with 1.5 sq.mm. PVC insulated 1100 V Grade copper conductor (FRLS/FRZH/FRZH) wires & 1.5 sq.mm. copper earth wire in concealed/ surface using 16 SWG MS conduits, accessories such as bends, tees, saddles, draw boxes, mounting boxes, inner plates, cover plates, ceiling rose etc (wherever required) and chromium plates brass screws/ rowel plug etc. The circuit wiring starting from DB to point control box/ switch box using 2 X 2.5 sq.mm PVC insulated 1100 V grade multi- stranded copper conductor wire & 2.5 sq.mm. PVC insulated earth wire (color code to be used). (Flexible conduit/ elbow not allowed). The conduit to be laid in ceiling with proper clamps/ wall/ floor and filling the chase with cement mortar and finishing the same in original form/ wooden partition/ above false ceiling with proper clamps etc. all complete.				
	(Wherever required as per standard specifications).				
	i) Each circuit shall have independent earth wire.				
	ii) Each point shall be earthed.				
	iii) Circuit wiring is to be included in point wiring rates.				
i	One light points controlled by one 6 amp. Modular switch.	Nos.	10.00		
ii	Two light points controlled by one 6 amp. Modular switch.	Nos.	41.00		
iii	Three light points controlled by one 6 amp. Modular switch.	Nos.	7.00		
iv	Four light points controlled by one 6 amp. Modular switch For cove light.	Nos.	0.00		
v	Five light points controlled by one 6 amp. Modular switch	Nos.	0.00		
vi	One call bell point with ceiling rose/ 6amp. 3 pin socket controlled by one 6 amp. Push Modular switch. With call bell	Nos.	1.00		
vii	One wall fan/ ceiling/ exhaust fan point with 6 amp 3-pin socket controlled by one 6 amp. Modular switch. The switch should be at switchboard level.	Nos.	13.00		
viii	Ceiling fan point controlled by one 6 amp.Modular switch With Regulator.	Nos.	4.00		
ix	Same as serial no 1 but using 2*2.5 + 1*2.5 Sqmm Copper Conductor FRLS/FRZH wires from DB to first 6A, 5 Pin modular socket controlled by one 6A switch and looped to the nearest second point with same 2*2.5 + 1*2.5 Sqmm copper conductor wires FRLS/FRZH insulated 1100V grade (max 3 points per circuit).				
a	Primary Point	Nos.	4.00		
b	Secondary Point looped	Nos.	8.00		

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2	POWER POINTS				
	Same as serial no.1, but wiring for 16 Amp, 6-pin sockets by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire with independent 1* 4.0 sq.mm earth wire from D.B. to first point 1 st socket and 1 st to 2 nd , socket with 2*2.5 sq.mm. and 1*2.5 earth wire including providing and fixing of 16 Amp, 6 -pin socket with 16 Amp. Switch. (Modular type switch/ socket/ plate etc. complete assembly) max 2 points per circuit.				
a)	Primary Point	Nos.	8.00		
b)	Secondary Point	Nos.	4.00		
3(a)	Same as serial no.1, but wiring for A/C socket by using 2*2.5 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*2.5 sq.mm. PVC insulated 1100 V grade copper conductor wire with modular type AC box(tiny trip type) with socket complete in all respects controlled by 25/32 A SP MCB to be provided near indoor unit. The point starts from DB including top.	Nos.	3.00		
3(b)	Same as serial no.1, but wiring for A/C socket by using 2*6 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*6.0 sq.mm. PVC insulated 1100 V grade copper conductor wire of weather proof type 2 way SPN DB complete in all respects controlled by with 40 Amp (10 KA) MCB to be provided near outdoor unit. The point starts from DB to the point near the outdoor unit.	Nos.	4.00		
3(c)	Same as serial no.1, but wiring for A/C socket by using 4*6 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*6.0 sq.mm. PVC insulated 1100 V grade copper conductor wire of weather proof type 2 way SPN DB complete in all respects controlled by with 40 Amp (10 KA) MCB to be provided near outdoor unit. The point starts from DB to the point near the outdoor unit.	Nos.	0.00		
4	COMPUTER POINTS				
a	Wiring with 2x2.5 sq.mm. + 1x2.5 sq.mm. PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 3 nos. 6 amps. 5 pin modular type sockets, one 6 amps modular switch with all accessories, inner/ outer plates, metal box etc. and to be fixed on wooden partitions/ by grouting on wall etc. as per requirement at site. The switch should be fixed above the top of counter with indicator and sockets under the counter b) Same as above but looped from the above 1st point to 2nd , point and 2nd point to 3rd point. (Maximum 3 points in a circuit) c) Same as above but provide for television. (Maximum 3 points in a circuit)				
	Primary Points	Nos.	4.00		
	Secondary Points	Nos.	8.00		

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S.No	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
3	CABLES, MAINS & SUBMAINS				
1	Supplying all materials and laying/ pulling 1100 volts grade PVC insulated copper conductor wires (FRLS/FRZH/FRZH) in MS conduit with all fixing accessories after cutting the floor, wall and the like etc. and replastering the floor level to original. Conduit must be 30 mm below the floor finish level.				
i	1 X 8SWG Cu wire in PVC conduits for earthing for internal DBS connections	RM	30.00		
ii	2 X 10 sq.mm. + 1 X 6 sq.mm. (UPS DB INCOMMER FROM UPS DB to UPS)	RM	20.00		
iii	S/L/T/C of 4 C X 10 sq.mm.at 1100 volts grade PVC insulated aluminum conductor armoured cable with 12 gauge GI earth wire including cables end termination using appropriate Lugs,Glands,termination acessories,Clamps etc.as required as per specification (LIGHT DB).	RM	25.00		
iv	S/L/T/C of 4 C X 16 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 12 gauge GI earth wire including cables end termination using appropriate Lugs,Glands,termination acessories,Clamps etc.as required as per specification (POWER DB + UPS DB).	RM	30.00		
v	S/L/T/C of 4 C X 25 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 12 gauge GI earth wire including cables end termination using appropriate Lugs,Glands,termination acessories,Clamps etc.as required as per specification (AC VTPN).	RM	30.00		
vi	S/L/T/Cof 4 C x 70 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination acessories, Clamps etc.as required as per specification (Mains).	RM	30.00		
4	DISTRIBUTION BOARD				
	Supplying, installing, testing & commissiong of surface/recessed mountings, Double door 415 volts TPN MCB distribution board of steel steel, 1.6 mm thick dust phosphatized and painted, inclusive of 100 amps, tinned copper busbars, earthbar, common neutral link, din bar for mounting of MCB's detachable gland / knock out plate & with built in loose wire boxl, and superior make terminal connectors for all incoming and outgoing circuits duly prewired with adequate size of PVC insulated copper wires between the bus bars and the MCB's as well as the incomer and upto the terminal connectors/ neutral link and ready for installation of following ways as required.				

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	Use 'B' curve MCB's for lighting & small power circuits, 'C' curve for motor duty i.e. for pumps, AC motors, window and split AC's etc. & 'D' curve for UPS DB's i.e. for computers/ PC's circuit. Main incomer & outgoing circuit MCB's shall be selected accordingly i.e. type B,C & D. Contractor to select the MCB's accordingly as per the nature of the circuit/ load.				
	Each DB shall have separate neutral links of rating not less than 100A for each phase.The main incoming neutral link shall be in addition to three outgoing neutral links & shall be of 125A.				
	UPS DB's shall have a dedicated Earthing link fixed on insulated supports, which will be in addition to body earth link.				
	All internal inter connecting wiring with in the DB's shall be PVC insulated flexible copper conductor wires of adequate capacity as per the current rating.				
	Inside each DB, a DB chart is to be fixed.				
a	4-way TPN DB (LIGHT DB)	Nos.	1.00		
	Incomer:-				
	1 No. 32 A 4P RCCB (100 MA) plus blanking plates.				
	Outgoing:-				
	12 Nos.10/20 Amp (10 KA) SP MCB				
b	4-way TPN DB (POWER DB)	Nos.	1.00		
	Incomer:-				
	1 No. 40 A 4P RCCB (300 MA) and blanking plates				
	Outgoing:-				
	12 Nos.16/20/25 Amp (10 KA) SP MCB				
c	4-way TPN DB(SERVER DB)	Nos.	1.00		
	Incomer:-				
	1 No. 63 Amp TPN (10 KA) MCB as Incomer				
	Outgoing:-				
	3 Nos. 40 Amp (10 KA) DP MCB, For UPS				
	2 Nos. 25 Amp (10 KA) SP MCB, For UPS AC				
	4 Nos. 6/10/16 Amp (10 KA) SP MCB, For Lights & Power				
d	8-way SPN DB (For UPS Sub DB)	Nos.	1.00		
	Incomer:-				
	1 No. 25 A DP RCCB (100 MA)				
	Outgoing:-				
	6 Nos.10Amp (10 KA) SP MCB				
e	6 -way V-TPN DB (AC)	Nos.	1.00		
	Incomer:-				
	1 No. 63 Amp 4 Pole (16 KA) MCCB				
	Outgoing:-				
	3 No. 32 Amp (16 KA) TP MCB				
	9 Nos.10/16/25/32 Amp (10 KA) SP MCB				

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S.No	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
7	MAIN PANEL AND METER BOARD				
	Designing, fabrication, supply, installation, testing and commissionings of front operated cubicle type compartmentalised, front access, free standing on 75MM "I" MS channel, dust and vermin proof (IP 42 degree protection) panel suitable for use at 415V, 3 phase, 4-wire 50Hz system suitable for fault level of required value symmetrical at 415V fabricated from 2mm thick CRCA MS sheets with hinged, gasketted (Metal based neoprene) locable doors having structural reinforcement including 3mm thick gland plates on top and bottom, lifting hooks, GI earth strip of required size with 2 nos earth terminals, 2 nos 230V AC operated 250mm X 250mm size axial fans for exhaust of heat with On-Off toggle switches including 2 coated primer and 2 power coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with interconnections etc as per specifications as required.main panel board of approved make (KRYPTON POWER CONTROLS/R-FLEX/TRICOLITE/Supertech Power control Type of Approval as instructed by the SBI/Architect)as per the following specifications.				
	All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The busbars insulation shall be with heat shrinkable sleeves SMC/ DMC shrouds and busbar supports shall be used. Padlocking facility shall be provided on all outgoing feeders doors and switch handles shall be locable in OFF position.				
	Suitable arrangement shall be made for termination of multiple incoming cables.				
	All kA values indicated shall be Ics breaking capacity				
	GA drawings shall be got approved from SBI				
a.	Panel shall be consisted of : -				
	INCOMER FROM MAIN LINE				
	1 No.125 Amps,TPN MCCB (25 KA)with extendable rotary handle each thermal over current,instantaneous,Short circuit release,Earth fault.				
	BUSBARS				
	150amps TPN pole busbar chamber of suitable length with copper busbars.All busbars and interconnections shall be of suitable size copper strips.				
	INDICATING & CONTROL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A,PF etc.with 3 Nos.current transformers of 125/5A ratio,10 VA Class-1.0 metering. - 1 sets				
	Red/Blue/Yellow three phase indicating lamps with SP MCB backup protection.				

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	OUTGOINGS:-				
	2 Nos 40A TPN MCCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. For capacitor Bank AND AC VTPN.				
	INCOMER FROM MAIN PANEL BUS BAR				
	1no. 100 Amp 4-P On Load Change over switch with 1 No. 100 Amps, TPN MCCB (25 KA) with extendible rotary handle.				
b	INCOMER FROM MAIN PANEL BUS BAR				
	1no. 100 Amp 4-P On Load Change over switch with 1 No. 100 Amps, TPN MCCB (25 KA) with extendible rotary handle.				
	BUSBARS				
	125amps TPN pole busbar chamber of suitable length with copper busbars.All busbars and interconnections shall be of suitable size copper strips.				
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc.with 3 Nos. current transformers of 100/5A ratio,10 VA Class-1.0 metering.- 1 sets				
	OUTGOINGS:-				
	3 Nos 63A TPN MCCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For AC DB, UPS & AFPC)				
	1 Nos 40A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For PDB)				
	1 Nos 32A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For LDB)				
	3 Nos 40A DP MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For SIGNAGE)				
	The electrical panel as described above and specifications complete.	Set	1.00		
c	Supplying,installation,testing & commissioning of 15KVAR,APFC Panel autooperation and power factor should be nearing unity complete as required including all contactors,relays, indicating units etc. as required at site".Capacitor make: ABB/ Siemens/ Neptune	Set	1.00		
	5 nos. of capacitor duty contactors				
	2Nos.5 KVAR MPP type heavy duty capacitor banks along with 2 Nos.16A TP MCB of 10 KA service breaking capacity with heavy duty solid detachable neutral link				
	2 Nos.2 KVAR MPP type heavy duty capacitor banks along with 2 Nos.10A TP MCB of 10KA service breaking capacity with heavy duty solid detachable neutral link				

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	1 Nos.1 KVAR MPP type heavy duty capacitor banks along with 1Nos.10A TP MCB of 10 KA service breaking capacity with heavy duty solid detachable neutral link				
8	PUBLIC ADDRESS SYSTEM				
i	Supply & laying Wiring of 1.5 sqmm twin core shelded type of speaker cable in FRLS/FRZH PVC conduits i/c all accessories concealed/exposed in F.Ceiling/Wall complete as required including 1.6/2.0 mm thick PVC junction (Point Rate Basis).	Nos.	6.00		
ii	Supply,installation,testing and commissioning of following (BOSCH/AHUJA) make Music Accessories / Equipments.				
	Ceiling Speaker Unit 6 Watts LHM 0606/10	Nos.	6.00		
iii	SHURE/BOSCH/ AHUJA make Power Amplifier,100 Watts with output transformer etc.complete. Plena Range or as approved by the Bank capale of taking Inputs from USB Also	Nos.	1.00		
iv	Supplying of AHUJA/SHURE/BOSCH make Cordless Mike of minimum range 10M and compatible to	Nos	1.00		
v	6U Equipment Rack complete with monitor unit, speaker, power supply control etc. President make suitable for 1x100 watts amplifier system With all terminating set up.	Nos.	1.00		
	TOTAL FOR ELECTRICAL WORKS				

Note:- The rates quoted includes all other taxes , duties , loading, unloading , transportation. (Only GST will be paid Extra)

