

BILL OF QUANTITY FOR ELECTRICAL INSTALLATIONS WORK AT STATE BANK OF INDIA, RAUSAR BRANCH (11184 -Shifting) UNDER RBO-III SHAHJAHANPUR, AO LUCKNOW (WEST)						
S. No.	Item Description		Unit	Qty	Rate	Amount
(A)	SUB TOTAL SECTION-I: INTERNAL ELECTRICAL WORKS, WIRING FOR UPS AND ACs					
1.	Design	Supply, installation, testing and commissioning (SITC) of new fully compartmentalised, wall/ Floor mounted, if floor mounted than stand should be made of MS channel/angle grouted to floor with the panel 450 mm above ground level, bottom/top cable entry, front operating, dead back main electrical panel made of 16g CRCA sheet steel painted with one coat of red oxide primer and two coat of outdoor type synthetic enamel paint (spray painted) after de greasing, de rusting and phosphating, with two earth studs, 30X6 mm G.I. Earth bus, SMC/DMC insulator as required and comprising of the following:				
	Incomer	(i) One 4P, 415 V, 200A, 35 KA breaking capacity MCCB with adjustable thermal and fixed magnetic release. (Mains I/C) (ii) One 4 pole, 415V, on load, 200A,Changeover for Manual Operation . (Generator I/C) (iii) Digital multi function meter having all parameters (A/V/I/PP/ KW/KWH/KVAH) Make : ABB -M1M12 (Mains I/C)				
	Outgoing	(i) One no. 415V, 4P, 100A, 25KA breaking capacity MCCB (AC) and Connection to this MCCB is to be done after the main incomer MCCB and before changeover. (One for AC in common hall) (ii) Four nos. 415V, 4P, 100A, 25KA breaking capacity MCCB with adjustable thermal and fixed magnetic release out going. (One for UPS, One for power, One for ATM and One for L&F) (iii) Three no. 415V, 4P, 63A, 10 KA breaking capacity MCB (Two for light, AC in BM chamber and One for Signage) (iv) Two no. 230V, DP, 40A, MCB C-series, 10 KA breaking capacity (One for glow sign board and one spare) Two Bus bar chamber with R,Y,B and N bus bars made of 25X10 mm Aluminium (Indal, Hindalco, Balco)(one for AC MCCB before Changeover and one for rest of the panel)	Set	1.0		
	Design Specifications	Danger plate should be provided. All MCCB should be with external rotary handle, separator sheet and spreader terminals. Minimum phase to phase distance 32 mm, phase to neutral and earth 26 mm. Metallic partition should be provided between adjacent cubical/compartment. Cubical should be made of vermin and dust proof by means of suitable gasket around all door/covers removable gland plates to be provided. All bus bar should be sleeved by heat shrinkable PVC red, yellow, blue and black coloured. All wiring to be done by PVC insulated 1100V grade copper flexible conductor wire of following size. CT circuit : 2.5 sq. mm PT circuit : 1.5 sq. mm all wires to be provided with appropriate crimping type lugs/ferrules for termination. Protection shrouds to be provided on incoming side of incomer and on normally live parts when cubical door is opened. Bakelite barriers of 4 mm thickness shall be provided on incoming and outgoing side of incomer. Approval of general layout, manufacturing and single line diagram drawings from consultant/Bank's Engineer is required before commencing manufacture and the panel should be tested in the presence of Consultant/Bank's Engineer at manufacturer's premises before dispatch to site along with HV withstand and insulation resistance test reports.				
		LT Switch Board Panel Approve make; Locally fabricated LT Panel with all components of S. No. 01 of SIEMENS/ GE/ ABB/ Haqer/ Schneider/ LEGRAND Make.				
2.		Supply & installation on angle iron frame of 4-way TPN distribution board double door comprising incomer 63 A 4P RCCB 300 mA and with 03 Nos 40 A and 09 Nos 6-32 A SPMCBs as outgoing. All MCB to be of C series, 10 kA with blanking plates for blank slots; if required. Complete connection testing etc. in all respect (TPN-DB for Raw Power/ AC circuit).	Set	2.0		
3.		Supply & installation on angle iron frame of 4-way TPN distribution board double door (MS/ Metal) comprising with 63 A 4P-MCB 10 KA incomer and 4 X 40 A SPMCBs and 8 nos. 6-32 A outgoing, all MCB to be of C curve, 10 KA breaking capacity and board with blanking plates (One UPS TPN-DB to be provided in UPS Room).	Set	1.0		
4.		Supply & installation on angle iron frame of 4-way TPN distribution board double door (MS/ Metal) comprising with 63 A FP - MCB 10 KA incomer and 2 X 40 A SPMCBs and 8 nos. 6-32 A outgoing, all MCB to be of C curve, 10 KA breaking capacity and board with blanking plates (One For ATM Lobby - 02 Nos. 25A-RCCBs, 100mA for AC power circuit. 02 Nos. 40Amp SPMCBs for UPS power, 04 SPMCBs of rating 10A for light circuits and 02 No. SPMCBs of 25A for power/ raw power circuit)	No	1.0		
5.		Supply & installation on angle iron frame of 8 (2 + 6) way SPN distribution board (MS/ Metal) with metallic cover/ Door comprising of one 40 Amp in coming DP-RCCB and 06 nos. 6A-25A, 10kA out going SPMCB All MCB's to be of C series and 10KA breaking capacity. Complete Connection testing etc in all respect. (DBs for Light & Fan circuit, 6A SP-MCB for Light & Fan circuits)	Set	2.0		
6.		Supply & installation on angle iron frame of 8 (2 + 6) way SPN distribution board (MS/ Metal) with metallic cover/door comprising of one 40 Amp in coming DP-MCB and 06 nos. 6A-25A, 10kA out going SPMCB All MCB's to be of C series and 10KA breaking capacity. Complete Connection testing etc in all respect. (01 DB for UPS circuit, 10A SP-MCB for UPS circuits)	Set	2.0		
7.		Supply & installation on angle iron frame of 6 (2 + 4) way SPN distribution board (MS/ Metal) with metallic cover/door comprising of one 32 Amp in-coming DP-MCB and 04 nos. 6A-25A, 10kA out going SPMCB All MCB's to be of C series and 10KA breaking capacity. Complete Connection testing etc in all respect. (01 DB for UPS circuit, 10A SP-MCB for UPS circuits - ATM eLOBBY)	Set	2.0		
8.		Supply & installation on angle iron frame of 6 (2 + 4) way SPN distribution board (MS/ Metal) with metallic cover/door comprising of one 32 Amp in-coming DP-RCCB and 04 nos. 6A-25A, 10kA out going SPMCB All MCB's to be of C series and 10KA breaking capacity. Complete Connection testing etc in all respect. (01 DB for Light & Fan circuit, 6A SP-MCB for Light & Fan circuits)	Set	2.0		
9.		Supply & installation on angle iron frame of 8 (2 + 6) way SPN distribution board double door (MS/ Metal) comprising with One 40 AMP DP MCB-type Changeover for UPS incomer and 2 nos. 100mA, 40A RCCB outgoing for both UPS, all MCB to be of C curve, 10 KA breaking capacity and board with blanking plates; if required. (One for ATM Lobby & One for Branch UPS Room)	Set	2.0		
10.		Supply & installation of 08 Nos. 25/32 Amp, 100 MA DP RCCB 10 KA, in a suitable SNP-DB/ TPN-DB MS box, Double Door to be connected <u>before the AC stabilizer</u> , complete testing fixing/ installation complete in all respect (Branch ACs).	Set	1.0		
11.		Supply & installation on angle iron frame of manufactures sheet steel 20/ 25A socket board with cover and 2 pole & earth metal plug and socket /Modular socket board and 25/32 Amp SP-MCB complete in all respect for air conditioners. (BM Cabin/ Lunch Room/ Customer Lobby - ACs)	Nos	8.0		
12.		DISTRIBUTION CABLE:				
		SUPPLY AND LAYING OF CABLE:				
		Supplying and laying of 1.1 KV grade aluminium conductor, PVC/XLPE insulated and sheathed, armoured cables of following sizes conforming to IS:1554 (Part-I) underground or on surface with one 8 SWG G.I. earth continuity wire all along the run with MS painted saddle and clamps made of 6 mm thick MS flat.				
	(a)	3.5 core X 50 sq.mm. For main incoming from UPPCL Pole.	Mtr	45.0		
	(b)	3.5 core X 35 sq.mm.(AC and Generator)	Mtr	35.0		
	(c)	3.5 core X 25 sq.mm. (UPS DB/Light/Power/ ATM eLobby)	Mtr	40.0		
13.		CABLE TERMINATION				
		End termination of 1100 V grade, armoured Al cable of following sizes using Dowells make Cu lugs and double compression brass cable gland where required.				
	(a)	3.5 core X 50 sq.mm.	Set	2.0		

S. No.	Item Description	Unit	Qty	Rate	Amount
	(b) 3.5 X 35 sq.mm. (AC)	Set	4.0		
	(c) 3.5 X 25 sq.mm. (UPS DB/Light/Power)	Set	6.0		
14.	Supply & installation of HRC fuse unit (03) 200 A and 01 No. 200 AMP with Neutral link near main Energy meter & near Generator set on suitable wooden board (porcelain kit-kat fuse unit) with connection etc.	Nos.	2.0		
15.	Supply and fixing MS danger notice board. (MAINS/ UPS)	Nos.	1.0		
16.	Wiring for two indication lamps from UPS output DP/ DB critical/ non critical circuits in separate PVC conduits with lamp (3Watt - LED Lamp), holder in a suitable box with connections/ testing etc. complete in all respect in UPS room. (One for Branch)	Nos.	1.0		
17.	Supply, installation, testing and commissioning of power point for glow sign board with 3 X 2.5 sq.mm. Cu wire for phase, neutral and earth in PVC conduit including all accessories boxes as required with 25 Amp DPMCB with MS box etc. complete in all respect. (For Branch)	Nos.	1.0		
18.	Supply, installation, testing and commissioning (SITC) of 2 X 6.0 + 1 X 6.0 sq.mm., 1100 V grade, FRLS, multi strand copper conductor PVC insulated wire in medium duty rigid or flexible PVC conduit as required preferably concealed in floor/ wall including chase cutting and making good of damages/ surface including connections, complete in all respect (For incommer of TPN-DBs to SPN-DBs).	Mtr	125.0		
19.	Supply, installation, testing and commissioning (SITC) of 2 X 4.0 + 1 X 4.0 sq.mm. 1100 V grade, FRLS, multi strand copper conductor PVC insulated wire in medium duty rigid or flexible PVC conduit as required preferably concealed in floor/wall including chase cutting and making good of damages or on surface including connections, complete in all respects (From RCCB/ SPMCB to Hi-wall Split AC Box SP MCB/ Power Point).	Mtr	175.0		
20.	Supply and fixing of 04 Nos 10 Amp Switch and 04 Nos. modular type Per point 16/6 Amp socket 5pin (8-Module For Sockets & 4-Module for Controlling Switch - UPS) on suitable modular plate and manufacturers steel box including circuit wiring from SPNDB to computer socket board With FRLS 2.5sqmm PVC copper wire with 1100v grade flexible / stranded wires for Phase neutral and earth in PVC conduit on surface and floor concealed up to computer socket boards complete with MS saddle, fixing, connection, testing / commissioning in all respect for system/prn room on counters, tables, wall, as required by the Office. (One power board with 3 socket /switches & required wiring will be treated one point) Colour coding /ferule marking may be taken care. NOTE (i) One circuit to be connected with maximum 03 power Board. To avoid use of more number of PVC pipe 32/ 25/ 20 mm PVC pipe may be used ie as per IS For different SPNDBs separate circuit and PVC conduit to be used.				
	(i) Primary Point	Points	10.0		
	(ii) Same as above but looped from the above 1 st Point to 2 nd point.	Points	8.0		
21.	Supply and burying of safe Earthing Electrode T-19 (hot dip Galvanised), Length 3000 mm, outer pipe 50 mm, inner pipe 25, Terminal Dia 12 mm, outer GI pipe of 16 SWG and inner GI pipe of 12 SWG with Hot dip Galvanization up to 100 micron filled with crystalline conductive mixture (CCM) having Anti-corrosive & conductive property with 50 Kgs activated soil (BFC) capable of reducing the soil resistivity with good mixture of retaining capacity along with CI Box with hinged cover and masonry housing (from electrode terminal to SW board, cost of GI strip will be extra). GI strip directly to be connected from GI pipe with double nut bolt and spring washer. Make: As approved in UPPWD & CPRI certified. (one for 2 + 8 way TPN DB in system room, one for panel safety and 02 for UPS body/ isolation transformer, one earthing to be used for genset neutral).	Set	5.0		
	(i) SITC of 25 X 3 mm GI Strip concealed on wall/ floor up to 1 st per meter point complete in all respect.	Mtr	30.0		
	(ii) Providing & installation of 1 X 10 sq.mm. PVC insulated copper wire in 20 mm PVC pipe from earth station to UPS room complete in all respect including fixing with nut and bolts (concealed on wall/ floor).	Mtr	110.0		
22.	Distribution wiring including circuit wiring from TPNDB/SPNDBs to switch boards with 1100 V grade, PVC insulated, FRLS, multi strand Cu wire of size 2.5 sq.mm. for P, N & E in ISI marked PVC conduit, and point wiring from switch board to point outlet with 1100 V grade, PVC insulated, FRLS, multi strand Cu wire of size 1.5 sq.mm. for P, N & E in ISI marked PVC conduit with same make accessories in concealed/ surface or in double lock PVC casing/ capping and with modular type switches in metallic modular box, front plate, cover plate, 3 plate ceiling rose, angular holder, with two internal earthing terminals/ studs for earthing. Junction boxes to be covered with ISI mark 3 mm thick phenolic laminated sheet cover, brass screws and cup washers for cover fixing PVC conduit and other accessories. (i) All switch boards and regulators to be modular type, MS box should be 16 swg with 3 mm thick ISI marked phenolic laminated cover, brass screws and cup washers and Modular type 6/10 A switch/socket. (ii) Point wiring should be inclusive of continuous wire length (P, N & E) upto connection block of light fitting/fans. However, if there are more one light/fan point on one switch board than Neutral and Earth can be looped from one point to another point upto the 8 points/fitings with 1100 V grade, PVC insulated, FRLS, multi strand Cu wire of size 1.5 sq.mm. Beyond eight point new wire from the switch board is to be provided (iii) Provision for fan regulators shall be electronic step type 400 W rating. (iv) Ceiling fan point shall be provided with regulators wherever specified. The switch boards to be considered accordingly.				
	(i) One Light point controlled by one switch	Nos.	75.0		
	(ii) Two Light point controlled by one switch	Nos.	5.0		
	(iii) Call bell point (With supply and fixing of Anchor make call bell)	Nos.	1.0		
	(iv) Ceiling fan point	Nos.	6.0		
	(v) Supply & installation of 3 pin 6 A socket outlet point including socket and controlling switch (On switch board/ Workstation- looped from raw power provided on counter).	Nos.	10.0		
	(vi) Supply & installation of 3 pin 6 A socket outlet point including socket and controlling switch (socket away from switch board for wall fan).	Nos.	10.0		
23.	Supply, installation, testing and commissioning of power point having one No. 16 A modular switch and 16 Amp modular socket, modular board with FRLS 4 sq.mm. Cu wire for phase and neutral and 2.5 sq.mm. Cu wire for earth in PVC conduit including all accessories, boxes as required, maximum Point on one circuit should not exceed Two. Circuit to be connected from PDB, controlled by each point with each switch testing/ commissioning in all respect. Cu wire of PVC 1100 V grade insulated for phase, neutral and earth, concealed properly. Wiring to commence from DB to switch board and then to the point including connection testing etc. all complete in PVC conduit (concealed on wall/ floor and making good the same). Item to include supply & installation of modular board, 15/20 Amp switches, sockets etc. complete for power board. (3-MODULE - RAW POWER - BM/CM Cabin, Lunch Room, Canteen & Hall to be mounted on Wall)				
	(i) Primary Point	Points	6.0		
	(ii) Secondary Point C Looped Point	Points	2.0		

S. No.	Item Description	Unit	Qty	Rate	Amount
24.	Supply, installation, testing and Commissioning of power point having One no. 10 Amp modular switch & 10 Amp modular socket, One no. 20 Amp modular switch & One nos. 20 Amp modular socket on modular metal board with FRLS 2.5 sqmm cu wire for phase and neutral and 2.5sqmm cu wire for earth in medium duty PVC conduit including all accessories box as required, Maximum Point on one circuit should not exceed two. For air purifier, TV, for office area, UPS room, guard room & entrance room at suitable place. (Record & stationary room to be connected through a lead or 3x1.5sqmm pvc copper wire in a thick PVC pipe to out side with 15Amp socket this will be paid extra) or as required by Office at suitable place) Circuit to be connected from lighting TPNCB, controlled by each point with each switch testing/ commissioning in all respect. Cu wire of PVC 1100V grade insulated for phase, neutral and earth, concealed properly. Wiring to commence from lighting TPNCB/Fuse unit to switch board and then to the point connection testing etc in all respect as per Office requirement. In PVC conduit (concealed on wall/floor and making good the same). Item include supply & Installation of modular MS board, 6/10Amp switches, Sockets etc. complete for power board. (RAW POWER - 06 MODULE- One at Each Counter)				
	(i) Primary Point	No.	12.0		
	(ii) Same as above but looped from the above 1 st Point to 2 nd point.	No.	6.0		
25.	Supply & installation of Wiring from TPNCB to isolation transformer/ Stabilizer and to UPS I/P (and earthing as provided) with 03 PVC copper wires of size point 10 sq.mm. for Phase & neutral in 20 mm PVC conduit, wire to be of 1100 V grade insulated with copper conductor. complete with ms saddle/ fixing/ connection testing commissioning etc. (UPS input/output).	Mtr	16.0		
26.	Supply & fixing, light, Fan & sw, socket point in System/UPS room/Printer room at suitable place as required by the branch, [03 point from UPS SPNCB/ DPMCB for Main Hall and one point in UPS room, one in BM Chamber complete testing, commissioning in all respect with 1.5 sqmm PVC 1100v grade copper insulated wire for phase, Neutral and earth (if required) in PVC conduit (concealed on wall/floor and making the same). Item include	Points	5.0		
27.	Preparation of Single line Diagram (SLD) as build drawing as per actual work done.	No.	1.0		
28.	Supply & Installation of Strong room, record room and locker room to be connected through a lead or 3X2.5sq mm PVC copper wire in a thick PVC FLEXI pipe to out side with 16/ 20 Amp socket (in side to be connected directly with proper connection – out side with power point.	No.	5.0		
SUB TOTAL SECTION-I: INTERNAL ELECTRICAL WORKS, WIRING FOR UPS AND AC					
(B) SECTION-II: SUPPLY OF ELECTRICAL LIGHT FITTING & FIXTURE ITEMS					
1.	Supply & installation of 600 mm X 600 mm in false ceiling, full panel, 30-36 W LED light fixture suitable for recess mounting complete in all respects with LEDs, driver, diffuser, housing complete in all respects.	Nos.	25.0		
2.	Supply & installation of LED in false ceiling, round/ square, recess mounting Warm White/ NW, 10-12 W downlighter complete with LED, driver etc.	Nos.	36.0		
3.	Supply & installation of LED flexi strip light of 5 mtrs. Length in 15 - 25 W with driver.	Nos.	12.0		
4.	Supply & installation of LED on wall/ ceiling, 1200 mm, 1 X 20 W batten type light fitting complete with LED tubular lamp with driver, complete in all respects.	Nos.	14.0		
5.	Supply & installation of Philips Occupancy sensor for light operation of BM Chamber/ Washrooms, control circuit, complete in all respects. (BM Cabin)	Nos.	1.0		
6.	Supply & installation of 450 mm sweep, oscillating type, wall mounting multi speed Metal Body Metal Blades Three Pin; if available wall fan with motor, wire guard, control, complete in all respects.	Nos.	6.0		
7.	Supply & installation of Heavy duty industrial type 230/ 250 mm metal body exhaust fan 1400 RPM (for UPS / Wash Rooms)	Nos.	4.0		
8.	Supply & installation of LED on wall/ceiling, 600mm, 10 W batten type light fitting complete with LED tubular lamp with driver, complete in all respects. (for Wash Rooms)	Nos.	4.0		
9.	Supply & installation of 1200 mm sweep 5-Star, Brushless Direct Current (BLDC) ceiling fan metal body, metal blades etc. (Cash/ UPS/ Locker/ Lunch/ Record/ Stationary Room)	Nos.	7.0		
10.	Supply & installation of spot light type LED in false ceiling/Cove, round/ square, recess mounting Warm White/ NW, 3 Watt downlighter complete with LED, driver etc.	Nos.	6.0		
SUB TOTAL SECTION-II: SUPPLY OF ELECTRICAL LIGHT FITTING & FIXTURE ITEMS					
(C) SECTION-III : AIR-CONDITIONING INSTALLATIONS (LOW-SIDE) WORK					
1.	Installation, testing and commissioning of 2.0 or 1.5 or 1.0 TR Hi wall type split air conditioner/ old AC dismantled from branch with wall cutting/ mounting, stabiliser and making good of damages complete in all respects.	Set	6.0		
2.	Supply, installation, testing and commissioning of insulated copper refrigerant piping set (suction and discharge) duly insulated by nitrile rubber for 2.0 TR Hi-Wall Split ACs. Size (thickness and dia) of both Copper pipe should as per recommendation of AC manufacturer's technical specification. Chiselling / Ducting / grooving for concealing the Refrigerant piping / cabling etc. at non - false ceiling areas. Acceptable Makes (Copper Pipe): Mandev/ Hariom/ Rajco/ Totaline/ Met Tube/ Jobu/ Campro	Mtr	40.0		
3.	Supply, installation, testing and commissioning of insulated copper refrigerant piping set (suction and discharge) duly insulated by nitrile rubber for 1.0/ 1.5 TR Hi-Wall Split ACs. Size (thickness and dia) of both Copper pipe should as per recommendation of AC manufacturer's technical specification. Chiselling / Ducting / grooving for concealing the Refrigerant piping / cabling etc. at non - false ceiling areas. Acceptable Makes (Copper Pipe): Mandev/ Hariom/ Rajco/ Totaline/ Met Tube/ Jobu/ Campro	Mtr	85.0		
4.	Supply, installation, testing and commissioning of inter connecting wiring/ cabling between indoor and outdoor of 1.0/1.5/ 2.0 TR hi wall split AC (power supply will be made available at the outdoor unit, please quote accordingly). Acceptable Makes: As per OEM provided specification.	Mtr	135.0		
5.	Supply, installation, testing and commissioning of PVC 25 mm water pipe with accessories and taking care to prevent leakages, for water drainage in concealed manner either on wall or under floor including making good of damages. Acceptable Makes (C-PVC): FinOlex/ Astral/ Supreme/ Ashirvad.	Mtr	65.0		
6.	Supply and installation of robust MS angle, MS flat fabricated floor/ wall mounting stand suitable for outdoor units of Cassette/Split ACs, painted with one coat of primer and two coats of synthetic enamel outdoor type paint including its grouting and making good of damages, complete in all respects.	Nos.	8.0		
7.	Dismantle, shifting & reinstallation of old existing 2.0/ 1.5/ 1.0 Hi-wall split ACs in the existing premises, gas charging as required, wet servicing etc., complete in all respect. (Lunch Room-01/ ATM Lobby)	Set	2.0		
SUB TOTAL SECTION-III: AIR-CONDITIONING INSTALLATIONS (LOW-SIDE) WORK					
COST SUMMARY :					
(A) SUB TOTAL SECTION-I: INTERNAL ELECTRICAL WORKS, WIRING FOR UPS AND ACs					
(B) SUB TOTAL SECTION-II: SUPPLY OF ELECTRICAL LIGHT FITTING & FIXTURES					
(C) SUB TOTAL SECTION-III: AIR-CONDITIONING INSTALLATIONS (LOW-SIDE) WORK					
Grand Total					
					Plus GST
NOTE: Rate are considered inclusive of all except GST. GST shall be admissible at prevalent rates/ rules. Please refer tender documents for accepted makes of supply items.					