

	BILL OF QUANTITIES FOR ELECTRICAL WORKS AT STATE BANK OF INDIA, SUKHPURA CHOWK BRANCH, ROHTAK. HARYANA.				
	<u>PART-I : COMPUTER POINTS & DISTRIBUTION</u>				
1	Supply all material, storing, handling, fixing of computer points computer points in suitable size of GI box including providing 3 nos 5 amps 3 pin modular sockets to be provided under table top and controlled by 1 no 15 A moduler type switch, indicator (to be provided above the table top in partition) with moduler cover plate etc complete as required including 3X2.5 sq. mm copper armored cable.. Note: Maximum two computer points are to be provided on one circuit. (Switches : Make: Anchor/Crabtree/North-West/MK	14.00	each		
2	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing modular type 02 NO 6 pin 15/16 Amp.socket 01 no 15/16 Amp modular switch and indicator modular switch, connections etc. as required for printer and BM cabin./ATM	5.00	each		
3	Supply, installation, testing and commissioning of factory fabricated distribution board rust inhibited powder coated sheet fabricated comprising of incoming and outgoing isolator & MCBs neutral link or neutral bus, top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as required as per details below. Make: Havells/HPL/Standard/Hager/ Legrand/L&T				
a)	8 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 6 No SPMCB 10/16 Amp. (UPS output)	1.00	no.		
b)	6 way SPN MCBDB comprising of 1 No 63 Amp DP Isolator and 4 No SPMCB 10/16 Amp.	1.00	No		
c)	4 Way TP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A FP TPN and 6 Nos.32 A DPMCBS etc complete as required.	2.00	no.		
d)	4 Way TP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 63 A FP MCB with 30mA ELCB and 12 Nos. 6/10 Amp SPMCBS etc complete as required. (for Light, Fan point.Raw power points).	1.00	no.		
4	Supply, installation, testing and commissioning of following capacity 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by under noted capacity:				
a)	20 Amp with 20 Amp. C Curve SP MCB. (for UPS OUTPUT AND 1.5 TR AC's) Make: Havells/HPL/Standard/ Hager/Legrand/L&T	6.00	no.		
b)	20 Amps. with 32 Amp. DP MCB for ACS	2.00	no.		

5	Providing and fixing of suitable size MS box fabricated with 16 G MS sheet either in recess wall or on surface to accommodate dedicated earth from earth electrode and further distribution of earth to computer points including providing of 5 mm bakelite on base connector strip and painting of box etc as required.	1.00	job		
6	Wiring of light points, plug points & power points				
	Wiring for light point/ ceiling fan point/ exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit ISI Mark, with 6Amp modular switch, modular plate, suitable GI junction & switch boxes & clip and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.(Make: Havells/ RR Kable / KEI/Finolex)				
	(Rate includes 3 x 2.5 sq.mm FRLS copper conductor, single core cable in PVC conduit for circuit/sub main wiring along with earth				
a)	6 Amp Switch controlling 1 light point	20.00	no.		
b)	6 Amp Switch controlling 4 no. downlights or 2 no. 2'- 0"x 2'-0" 36 watt light fitting	25.00	no.		
c)	Primary Wall fan point/ Raw Power Point controlled by 5 AMP socket controlled by 5amp switch	22.00	no.		
	Note: Lihgt points to be calculated ny numbers of lights and no extra cost shall be paid for dummy switch.)				
8	Providing and fixing of 03 no 200 Amps KITKAT with 1 no neutral link on suitable size of Bakelite sheet of thickness not less than 12 mm complete as required	1.00	job		
PART-II : PANELS & CABLES					
9	Supply at site installation testing and commissioning of panel fabricated with 16 G MS sheet. The panel shall be free standing type totally enclosed dust and vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, GI earth busbar, busbar chamber ,cable alleys interconnection with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of busbars. The panel shall be painted with two coats of enamel paint (Grey shade) over primer and shall also be provided with designation of Incoming and outgoing feeder as details below:				
	Panel shall be made from CPRI approved manufacturer				
	INCOMING				
	1 no MCCB Breaking Capacity 25 KA 160 Amp 4P , Model-DU250				
	1 no 0 -500V digital Voltmeter in separate compartment and digital Amp meter and one set of CTs (3 Nos) with CT Ratio 200/5 A with LED type phase Indication Lamps with protection fuses in a				
	200 Amps capacity 4 strips Aluminium bus bars.				
	OUTGOING				
	6 nos MCCB Breaking Capacity 10 KA 63 Amp 3P with seprate neutral Link, DU Series, L&T make.	1.00	set		
10	Supply, Installation, testing & commissioning of PVC insulated PVC sheathed armoured cable of 1100 V (IS ;1554 Part 1) and fixing of cable on wall with suitable size of clamps /saddles or laid in floor/recess wall including cutting of wall /floor and making good the damages etc complete as required of following sizes (ISI marked). (Make: Havells/ RR Kable / KEI/Finolex/Pymen)				

a)	3.5X50 sq. mm aluminum conductors with two Nos. 8 SWG GI wire	65.00	mtr.		
b)	3.5X25 sq. mm aluminum conductors with two Nos. 8 SWG GI wire	100.00	mtr.		
c)	3X6 sq. mm copper armored cable .	110.00	mtr.		
d)	3X2.5 sq. mm copper armored cable .	130.00	mtr.		
11	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium/Copper conductor cable of 1.1 kV				
a)	3.5X 50 sq.mm aluminum conductor	5.00	no.		
b)	3.5X 25 sq.mm aluminum conductor	10.00	no.		
c)	3X6 sq. mm Copper cable gland.	6.00	no.		
d)	3X2.5 sq. mm Copper cable gland.	60.00	no.		
12	UPS DISTRIBUTION BOARD				
	supply, installation, testing and commissioning of factory fabricated distribution board rust inhibited, powder coated sheet fabricated comprising of incoming and outgoing isolator and MCB's neutral link or neutral bus, top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as reqd. Make: Havells/HPL/Standard/ Hager/ Legrand/L&T as per details below :-				
a	4 way DB comprising of 2 no. 63 amp DPMCB (UPS out put)	2	each		
b	4 way TPNDDB Double Door comprising of 1 no. incoming 63 amp MCB & 3 no. 32 DPMCB	1	each		
13	Providing and laying following sizes of PVC insulated copper conductor cable of 1100 V in flexible/ PVC conduit pipe with accessories such as glands bends etc(as per requirement) including making necessary interconnection etc complete as				
	2 X 6 Sq mm with 1 no suitable insulated 2.5 sq mm copper wire in PVC flexible pipe. (Make: Havells/ RR Kable / KEI/Finolex)	20.00	mtr.		
14	Supply and fixing the 1 no.4 pole 200 Amps capacity change over switch with adaptor box on suitable size of MS base and angle iron frame of suitable size and strength for installation on wall /floor including grouting of frame & painting etc. complete as required .Make: Havells/HPL/Standard/ Hager/ Legrand/L&T	1.00	no.		
15	EARTHING				
	a)Supply and fix copper plate earth station with 600X600X3mm copper plate including all accessories such as watering pipe and funnel and providing masonry enclosure at top with cover plate	1	Sets		
	i.e excavation of pit, supplying and filling of salt charcoal, refilling of pit etc complete as required as per IS 3043-1987. The voltage between neutral and earth must be below 1 V.				
	b)Supply and fix GI plate earth station with 600X600X6mm GI plate including all accessories such as watering pipe and funnel and providing masonry enclosure at top with cover plate i.e excavation of pit, supplying and filling of salt charcoal, refilling of pit etc complete as required as per IS 3043-1987.	2	Sets		
16	a)Supply fixing and termination of 20X3 mm copper strip with earth station below ground level etc as required.	5	Meter		
	b)Supply fixing and termination of 20X3 mm G.I strip with earth station below ground level etc as required.	10	Meter		

17	a) Providing and fixing of 8 SWG copper earth wire in the recess for loop earthing etc. as required.	20	Meter		
	b) Providing and fixing of 8 SWG GI earth wire in the recess for loop earthing etc. as required.	30	Meter		
18	Supply and laying following dia 2 mm in thickness PVC pipe under floor or in recessed walls from earth electrode to UPS room for computer dedicated earthing				
	25 mm diameter	50	Meter		
PART-III AIR CONDITIONING WORK					
19	Supplying & Laying of following COPPER REFRIGERANT PIPING Thickness 22 SWG For Hiwall Split AC complete with fittings Suction / Discharge line insulated with 12 mm SUPERLON / ARMAFLEX suction line. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. (Make: Total Line/Armacell)				
	1/4" + 1/2" Refrigerant piping - For Hiwall Split AC's	105.00	mtr.		
	HWS/Cassette A.C. (2.0 Tr & 3.0Tr) Copper pipe size (5/8" & 3/8")	50.00	mtr.		
20	Supplying & laying recessed in wall Rigid ISI Mark PVC drain pipe of size 20mm dia complete with fittings, U traps etc. & as specified to the nearest toilet / drain point under floor or in recessed walls for AC drains including cutting of walls, bends & Tees. making good the damages etc. wherever required. (Make: Diplast/Supreme)	60.00	mtr		
21	Electrical flexible cable of 3x2.5sq.mm multi strand suitable for 1.5 Tr H.W Split & 2.00 Tr Cassette Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. (Make: Havells/ RR Kable / KEI/Finolex)	160.00	mtr		
PART IV - TELEPHONE & DATA CABLE					
22	Wiring for telephone points with 0.6 mm dia 2 pair insulated annealed tinned electrolytic copper conductor in 2 mm thick 25 mm dia ISI marked PVC conduit complete with accessories such as bends, junction boxes etc. with suitable size of G.I. box modular plate and cover in front on surface or in recess including providing and fixing modular type telephone socket outlet and making necessary connections etc. complete as reqd. (Make: Dglink/KEI/Finolex)	10.00	no.		
23	Supply, installation and testing & commissioning of Tag Block 20 pair for telephone connections Make krone	1.00	no.		
24	Providing , Laying, testing & commissioning of 10 pair telephone cable from outside govt. / bsnl DB to Rack for lease line, ISDN of Make: Delton, finolex, polycab.	20.00	mtr.		
25	Data cabling work for computer networking starting from mounting rack at system room with UTP CAT-6e LAN Data cable in 2mm thick 25 mm dia ISI mark PVC conduit with accessories such as bends, Tees, junction boxes including providing and fixing cat-6 I/O plates and SMB complete with all networking accessories etc	14.00	no.		
	testing and ferruling (D-LinK/MOLEX/AMP/COMMSCOPE). Note: maximum 6 no. data cable must be run in one pvc pipe.				
26	supply, installation, testing and commissioning of 24-port Patch Panel	1.00	no.		
27	Supply and installation, testing and commissioning of mounted rack 15" hight made of powder coated MS sheet	1.00	no.		

