

BILL OF QUANTITIES FOR ELECTRICAL, LIGHTING & DATA NETWORKING WORKS AT STATE BANK OF INDIA, DEV SAMAJ COLLEGE, FEROZPUR.(PB)

S.No.	Item / Specifications	Qty.	Units	Rate	Amount
PART-I : COMPUTER POINTS & DISTRIBUTION					
1.1	Supply all material, storing, handling, fixing and laying of 3X2.5 Sq. mm. 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 for computer points in suitable size of box fabricated with 16 G MS sheet including providing 3 nos 5 amps 3 pin sockets controlled by 1 no 5 A modular type switch, indicator and fuse mounted on 3 mm thick ISI marked hylam sheet and painting of box etc complete as required Note; max. two computer points are to be provided on one circuit.	16	each		
1.2	As per item 1 above but with 1 Nos. 15 A 5 pin socket controlled by 1 no 15 A switch and indicator.	6	each		
1.3	As per item 1 above but with 2 Nos. 15 A 5 pin socket controlled by 1 no 15 A switch and indicator.	3	each		
1.4	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
a)	2 X 6 sq. mm + 1 X 2.5 sq. mm earth wire	30	Mtr		
1.5	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, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. <u>including circuit wiring with 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire</u> as required.(Ht. upto 4.5mtrs from floor)				
A	1 no. light controlled by 1 no. switch	20	no		
B	2 no. light controlled by 1 no. switch	30	no		
C	5/6 pin 6 amp plug point with 6 amp switch	12	no.		
D	Primary Wall fan point controlled by 5 AMP socket controlled by 5amp switch	8	no.		
1.6	As per item 1 above for air conditioning points complete with Supply installation testing and commissioning of 3 pin 20/25 A 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by 1 no 32 A SP MCB.(1.5 TR Acs) Note; Independent circuit for AC point is to be provided starting from distribution system.	6	each		
1.7	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				
a)	12-way SPN MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 63 A DP Isolator and 10 Nos. 6/10 A MCBS etc complete as required.	2	no.		

c)	4 way SPDB comprising 1 no 63 A Four Pole TPNMCB (for ACs and UPS).	1	no.		
d)	4 way DB comprising of 2 nos 63A DP MCB	3	no.		
e)	4 Way TP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A 4P Isolator and 6 Nos. 32 A DPMCBS etc complete as required. (AC/POWER DB)	1	no.		
f)	4 Way TP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A 4P Isolator and 12 Nos. 6-32 A SPMCBS etc complete as required.(LIGHT Dbs)	1	no.		
1.9	Supply installation testing and commissioning of following 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by 1 No MCB				
(a)	20 Amps. with 20 Amp. SP MCB.	4	no.		
b)	30 Amps. with 32 Amp. SP MCB.	3	no.		
1.10	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	job		
	TOTAL OF PART -I				
PART-II : PANELS & CABLES					
2.1	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		
2.2	Main Panel: 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:				
	INCOMING				
	1 no MCCB Breaking Capacity 25 KA 200 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 separate				
	200 Amps capacity 4 strips Aluminium bus bars.				
	OUTGOING				
	3no MCCB Breaking Capacity 25 KA 100 Amp 3P & 3no MCCB Breaking Capacity 25 KA 63 Amp 3. DN Series, L&T make.	1	set		
2.4	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)				
a)	3.5X50 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	45	mtr.		
b)	3.5X35 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	0	mtr.		
c)	3.5x25 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	25	mtr.		

d)	4X10 sq. mm aluminum conductor with one no 8 SWG GI wire.	30	mtr.		
e)	3X6 sq. mm copper conductor armoured .	60	mtr.		
f)	3X2.5 sq. mm copper conductor armoured for ACS	35	mtr.		
2.5	End termination with brass compression glands including providing of lugs/ferrules and making necessary connection etc complete as required of the following sizes:				
a)	3.5X50 sq. mm aluminium conductors	4	no.		
b)	3.5X35 sq.mm aluminum conductor	0	no.		
c)	3.5X25 sq. mm aluminum conductors	4	no.		
d)	4X10sq.mm aluminum conductor	2	no.		
e)	3X6 sq. mm copper conductor	2	no.		
f)	3X2.5 sq. mm copper conductor	10	no.		
2.6	Providing and fixing the following switch 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 .				
a)	1 no.4 pole 200 Amps capacity change over switch with adaptor box	1	no.		
2.7	Providing and fixing 16 G MS sheet adopter box and also base frame for installation of MCB DBs plug and socket arrangements and to cover cables in system room including painting etc complete as required.				
	for UPS input/output distribution	1	no.		
	TOTAL OF PART -II				
PART-III : EARTHING					
3.1 (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 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.	1	set		
(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	set		
3.2 (a)	Supply fixing and termination of 20X3 mm copper strip with earth station below ground level etc as required.	3	mtr.		
(b)	Supply fixing and termination of 32x6 mm G.I. strip with earth station below ground level etc as required.	6	mtr.		
3.3 (a)	Providing and fixing of 8 SWG copper earth wire in the recess for loop earthing etc. as required.	10	mtr.		
(b)	Providing and fixing of 8 SWG GI earth wire in the recess for loop earthing etc. as required.	20	mtr.		
3.4 a)	Supply and laying following dia 3.38 mm(Confirming to ASTM D1785 Standard) in thickness heavy duty PVC pipe under floor or in recessed walls for AC drains. including bends Tees Etc. making good the damages etc. wherever required..				
	25mm	30	mtr.		
b)	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 including bends Tees Etc. making good the damages etc. wherever required..				
	25 mm diameter	40	mtr.		

	TOTAL OF PART -III				
PART-IV : AC PROVISIONING (COPPER PIPE, WIRING ETC)					
4.1	Supply, Installation, testing & commissioning of refrigeration pipe including cutting of wall & fixing with suitable saddles or clamps, providing suitable sizes of sleeves for passing refrigerant pipe from indoor to outdoor unit including making necessary arrangement etc. complete as required.				
a)	Hi Wall Split AC (1.0 & 1.5TR), copper pipe size (1/2" & 1/4")	70	mtr.		
4.2	Cutting of floor / wall for refrigerant /drain pipe including making good the damages complete as required, excluding the area having ceramic floor tiles, where chased floor will be got repaired by the firm executing AC installion work, However, the ceramic tiles will be got fixed by the Bank.	20	mtr		
4.4	Supply & laying of 3 core 2.5sq.mm. FRLS copper flexible cable for HWS AC, Make - FINOLEX / POLYCAB / HAVELLS / PYEMEN / ECKO	90	mtr		
	TOTAL OF PART - IV				
PART-V : TELEPHONE WIRING					
5.1	Wiring for telephone points with 0.6 mm dia 2 pair insulated annealed tinned electrolatic 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.	6	no.		
5.2	Supply installation and testing of Tag Block 20 pair for telephone connections	1	no.		
5.3	Supply and fixing 20 Pair Telephone Cable	25	mtr		
	TOTAL OF PART - V				
PART-VI : NETWORKING					
6.1	Wiring for computer net working starting from mounting rack with UTP Cat 6 cable in 2 mm thick 25 mm dia ISI marked PVC conduit pipe with accessories such as bends, junction boxes including providing and fixing I/O plates and SMB complete with all networking accessories etc complete as required	12	No		
6.2	Supply & Installation testing and commissioning of Patch Panel 24 port e	1	No		
6.3	Supply & Installation testing and commissioning of mounting rack 9 U high made of powder coated MS sheet complete.	1	No		
6.4	Supply Fixing and commissioning of Patch cable cat 6 of complete with 2 nos of connectors etc complete as required.(factory manufactured)				
	(a) 1 meter long	12	No		
	(b) 2 meter long	30	No		
	TOTAL OF PART - VI				
PART-VII : SITC OF FANS & FIXTURES					
7.1	SITC of 2'-0" x2'-0" Celing grid 33-36 watt LED panel fixtures with essential driver in false ceiling including making necessary arrangement for mounting the fixtures and connection with 2 x 1.5 sq.mm insulated copper cable from adjacent point in PVC flexible pipe etc Complete as reqd. Make Philips cat. RC 380 B- LED-30-6500PSE OD WH or equivalent of Wipro / Bajaj / Crompton.	10	no.		

