

BILL OF QUANTITIES FOR ELECTRICAL, DATA, TELEPHONE & LIGHTING WORKS AT STATE BANK OF INDIA, HARIGARH (PB)					
S.No.	Item / Specifications	Qty.	Units	Rate	Amount
<b>PART-I : COMPUTER POINTS &amp; DISTRIBUTION</b>					
1.1	Supply all material, storing, handling, fixing of computer points computer points in suitable size of GI/PVC 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 and 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, including termination & glands complete. Note: Maximum two computer points are to be provided on one circuit. (Switches : Make: Anchor/Crabtree/North-West/MK	12	each		
1.2	As per item 1 above but with 2 no. 15 amp 6 pin modular sockets controlled by 1 no. 15 amp modular switch with indicator including the cover plate. <b>(to be provide on top of each table) (one point on one circuit from MCB DB) (ATM)</b>	6	Each		
1.4(a)	RAW POWER: Supply all material, storing, handling, fixing of supply points in suitable size of GI/PVC box including providing 1 nos 5 amps 5 pin modular sockets controlled by 1 no 5 A moduler type switch with indicator to be provided under table top with moduler cover plate etc complete as required including 2x1.5+1x1.0 sq. mm copper flexible cable in 25mm dia PVC conduit complete. (independent circuit from MCB DB to a the supply point)(the switch, socket, indicator must be provide on top of tables)	10	each		
	SWO	3			
	Tables incld. BM	2			
	Hall	2			
	Pantry + water cooler area	1			
	Behind SWO = 2,	2			
	<b>TOTAL</b>	<b>10</b>			
1.4(b)	RAW POWER: Supply all material, storing, handling, fixing of supply points in suitable size of GI/PVC box including providing 1 nos 15 amps 6 pin modular sockets controlled by 1 no 15 A moduler type switch with indicator to be provided under table top with moduler cover plate etc complete as required including 3X2.5 sq. mm copper flexible cable in 25mm dia PVC conduit complete. (independent circuit from MCB DB to a the supply point)(switch with indicator on top of table and socket under table)	4	each		
	Pantry + water cooler area	4			
	<b>TOTAL</b>	<b>4</b>			
1.4(c)	RAW POWER: Supply all material, storing, handling, fixing of supply points in suitable size of GI/PVC box including providing 2 nos 15 amps 6 pin modular sockets controlled by 1 no 15 A moduler type switch with indicator to be provided under table top with moduler cover plate etc complete as required including 3X2.5 sq. mm copper flexible cable in 25mm dia PVC conduit complete. (independent circuit from MCB DB to a the supply point)(switch with indicator on top of table and socket under table)	6	each		
	Tables incld. BM	2			
	Hall	4			
	<b>TOTAL</b>	<b>6</b>			
1.5	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	20	Mtr		
	UPS input/output leads				
	for 2 UPS	2x10=20mtr			
1.6	POINT WIRING:				

	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.(Wires Make: Havells / KEI/Finolex) (Switches : Make: Anchor/Crabtree/North-West/MK)				
	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 wire )				
a)	single 6 Amp Switch controlling 1 light point for T-5, Wall Fans, exhaust Fans , Ceiling fan and other seprate room supply only	12	no.		
	<i>T-5</i>	3			
	<i>Exhaust Fans</i>	4			
	<i>Ceiling Fans</i>	1			
	<i>single lights (pantry/ toi)</i>	4			
	<i>TOTAL</i>	12			
b)	single 6 Amp Switch controlling 2 no. LED downlight / 1 no. 2'- 0"x 2'-0" 36 watt light fittings	26	no.		
	<i>for 2x2 lights = 14/2</i>	7			
	<i>Downlights = 57/4</i>	15			
	<i>Striplight</i>	4			
	<i>TOTAL</i>	26			
c)	single 6Amp socket controlling by 5Amp Modular switch in switch boards etc complete as required	10	no.		
d)	Primary wall fan point including 5Amp 3-pin socket, controlled by 5Amp switch	5	no.		
	Note: Lights/fans points to be calculated by numbers of lights and no extra cost shall be paid for dummy switch.)				
1.7	<b>DISTRIBUTION BOARDS</b>				
	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)	6-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 4 Nos. 6/10 A MCBS etc complete as required.	1	no.		
b)	8-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 6 Nos. 6/10 A MCBS etc complete as required.	1	no.		
c)	6 way SPN MCBDB Double door comprising 1 no 40 A Isolator and 4 Nos. 6/10 A MCBS.	0	no.		
d)	4 way SPDB comprising 1 no 63 A Four Pole TPNMCB ( for UPS INPUT).	1	no.		
e)	4 way DB comprising of 2 nos 63A DP MCB (UPS OUTPUT)	2	no.		
f)	<u>ACDB</u> : 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. <b>(for Air conditioning only)</b> .	2	no.		
g)	<u>LIGHTING DB</u> : 4 Way (8module+12) TPN MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 63A 4P 30mA ELCB, 1 no. 63Amp, 4P isolator and 12 Nos. 6/10 Amp SPMCBS etc complete as required. (for Light, Fan point, Raw power	2	no.		
h)	<u>RAW POWER DB</u> : 4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 63 A FP TPN and 12 Nos. 16/20/25 Amp SPMCBS etc complete as required. (for Raw Power Only)	2	no.		

1.8	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 25 Amp. SP MCB. - UPS OUTPUT	4	no.		
b)	30 Amps. with 32 Amp. SP MCB. - UPS INPUT	3	no.		
1.9	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 20/25A SP MCB. (for air -conditioning points - 1.5 TR Acs) Note; Independent circuit for AC point is to be provided starting from distribution system, with 3x2.5sqmm copper armoured cable	6	each		
1.10	Supply installation testing and commissioning of 3 pin 32 A 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by 1 no 32A SP MCB. (for air -conditioning points - 2.0 TR Acs) Note; Independent circuit for AC point is to be provided starting from distribution system.	0	each		
1.11	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		
<b>TOTAL OF PART -I</b>					
<b>PART-II : PANELS &amp; CABLES</b>					
2.1	Providing and fixing of 3 nos 200 Amps Kitkat with 1 no neutral link on suitable size of Bakelite sheet of thickness not less than 25 mm complete as required	1	job		
2.2	<b>MAIN PANEL:</b>				
	Supply at site installation testing and commissioning of wall mounted cubicle type electrical panel comprising MCBs, bus bar, cable alleys etc fabricated with 16 G MS sheet and baked or spray enamel painted complete with rubber gaskets name plate interconnection etc. The panel shall consist of:(electrical load must be balanced in all three phases )	1	no.		
	<b>INCOMING</b>				
a)	1 no MCCB Breaking Capacity 36 KA 160 Amp 4P , DN Series, L&T make.				
b)	1 no 0-500V Voltmeter with selector switch in separate compartment and Amp meter with selector switch and one set of CTs ( 3 Nos ) with CT Ratio 200/5 A with LED type Indication Lamps with protection fuses in a separate compartment				
c)	200 Amps capacity 4 strips Aluminium bus bars.				
	<b>OUTGOING</b>				
a)	2 Nos 63Amp & 4 No. 100 Amp MCCB Breaking Capacity 25 KA 3P with separate neutral Link, DU Series, L&T make.				
2.3	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)	3.5X95 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	0	mtr.		
b)	3.5X50 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	30	mtr.		
c)	3.5X25 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	20	mtr.		
	<i>Main Panel to Change over</i>	5			
	<i>Panel to ACDB</i>	5			
	<i>Panel to RPDB</i>	10			
	<i>total</i>	20			

d)	4x16 sq. mm aluminium conductors with two Nos. 8 SWG GI wire.	35	mtr.		
e)	4X10 sq. mm aluminum conductor with one no 8 SWG GI wire.	20	mtr.		
	Panel to LDB	20			
	total	20			
f)	3X6 sq. mm copper conductor armoured .	60	mtr.		
	From UPS room to UPDB-1	10			
	UPSDB-2	20			
	total	30			
g)	3X2.5 sq. mm copper conductor armoured for ACS	85	mtr.		
	AC: (ACDB TO AC box/indoor unit)				
	AC-1 - BM	20			
	AC-2 -SWC	20			
	AC-3 -Hall	15			
	AC-4 -Hall	10			
	AC-5 & 6 ATM	20			
	TOTAL	85			
2.4	End termination with brass compression glands including providing of				
a)	3.5X95 sq. mm aluminium conductors	0	no.		
b)	3.5X50 sq. mm aluminium conductors	6	no.		
c)	3.5X25 sq.mm aluminum conductor	6	no.		
d)	4x16 sq. mm aluminum conductors	6	no.		
e)	4X10Sq.mm aluminum conductor	2	no.		
f)	3X6 sq. mm copper conductor	4	no.		
g)	3X2.5 sq. mm copper conductor	12	no.		
2.5	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 .				
	1 no.4 pole 200 Amps capacity change over switch with adaptor box	1	no.		
2.6	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.		
<b>TOTAL OF PART -II</b>					
<b>PART-III : EARTHING</b>					
3.1 (a)	Supply and fix copper plate earth station with 600X600X3mm copper plate with 5M length 20x3mm size copper strip below Ground Level, 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. (marking of	1	set		
(b)	Supply and fix GI plate earth station with 600X600X6mm GI plate with 5M length 20x3mm size GI strip below Ground Level 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.(marking of	2	set		
3.2 (a)	Providing and fixing of 8 SWG copper earth wire in the recess for loop earthing etc. as required.	65	mtr.		
(b)	Providing and fixing of 8 SWG GI earth wire in the recess for loop earthing etc. as required.	20	mtr.		
3.3	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	65	mtr.		
<b>TOTAL OF PART -III</b>					
<b>PART-IV : AC PROVISIONING (COPPER PIPE, WIRING ETC)</b>					

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")	130	mtr.		
	AC-1BM	20			
	AC-2 SWC	20			
	AC-3 & 4 HALL	30			
	AC-6 & 7 ATM	30			
	TOTAL	100			
b)	HWS / Cassette AC (2.0TR & 3.0TR) copper pipe size (5/8" & 3/8")		mtr		
	CASSETTE AC:				
4.2 a	Cutting of floor/wall and Supplying & laying recessed in wall Rigid ISI Mark PVC drain pipe of size 25 mm / 32 mm 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. <b>(Make: Diplast/Supreme)</b>	60	mtr		
4.2b	S/F of 4mm insulation on drain pipe above false ceiling area	30	mtr		
4.3	Supply & laying of 4 core 2.5sq.mm. FRLS copper flexible cable for HWS /	160	mtr		
	between Indoor & outdoor units				
	Split AC	120			
	Cassette AC	0			
	Looping (2m x 6no.)	12			
	TOTAL	132			
4.4	Supply & laying of 3 core 2.5 sq.mm. FRLS copper flexible cable for HWS / Cassette AC. Make-FINOLEX / POLYCAB / HAVELLS (indoor to outdoor unit)	60	mtr		
<b>TOTAL OF PART - IV</b>					
<b>PART-V : TELEPHONE ,</b>					
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.		
	Offier	1			
	SWO: 3x1	3			
	BM	2			
	TOTAL	6			
5.2	Supply installation and testing of Tag Block 10 pair for telephone connections, with kron box	1	no.		
5.3	Supply and fixing 10 Pair Telephone Cable	40	mtr		
<b>TOTAL OF PART - V</b>					
<b>PART-VI : NETWORKING</b>					
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 with numbering/ferling on both end of networking cable (maximum 5 cat-6 cable in one pvc pipe)	12	No		
	Officer Tables : 1x2	4			
	SWO: 3x2	6			
	BM-1x2	2			
	TOTAL	12			

