

<b>BOQ FOR ELECTRICAL WORKS OF STATE BANK OF INDIA BRANCH at PALI, HARYANA.</b>					
	<b>ITEM DETAILS</b>	<b>QTY.</b>	<b>UNIT</b>	<b>RATE</b>	<b>AMOUNT</b>
<b>PART-I : COMPUTER POINTS &amp; DISTRIBUTION</b>					
<b>1</b>	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 <b>(to be provided above the table top in partition)</b> 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. <b>(Switches : Make: Anchor/Crabtree/North-...)</b>	12	each		
<b>2</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. <b>Make: Havells/HPL/Standard/ Legrand/L&amp;T</b>				
<b>a)</b>	12 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 10 No SPMCB 10/16 Amp. <b>(UPS output)</b>	1	no.		
<b>b)</b>	8 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 6 No SPMCB 10/16 Amp. <b>(UPS output)</b>	1	no.		
<b>c)</b>	6 way SPN MCBDB comprising of 1 No 63 Amp DP Isolator and 4 No SPMCB 10/16 Amp. <b>(UPS output)</b>	1	No		
<b>d)</b>	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.		
<b>e)</b>	4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 63 A FP MCB with <b>30mA ELCB</b> and 12 Nos. 6/20 Amp SPMCBS etc complete as required. <b>(for Light &amp; Fan point only)</b>	2	no.		
<b>f)</b>	<b>Raw Power DB:</b> 4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A FP MCB and 12 Nos. 20/25 Amp SPMCBS etc complete as required. <b>(for Raw Power Only)</b>	2	no.		
<b>3</b>	<b>RAW POWER:</b> Supply all material, storing, handling, fixing of Raw power points in suitable size of GI/PVC box including providing 1 nos 15 amps 6 pin modular power sockets to be provided controlled by 1 no 15 A moduler type switch and indicator with moduler cover plate etc complete as required including 2X2.5 sq. mm FRLS copper wire + earth wire in dia 2 mm in thickness ISI Mark PVC pipe.	12	each		

	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
	Note: <b>One RAW power points are to be provided on one circuit and directly to be connected on Power DB.</b> (Switches : Make: Anchor/Crabtree/North-West/MK) (Wires Make: Havells/ RR Kable / KEI/Finolex)				
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: (Make: Havells/HPL/Standard/Legrand/L&T)				
a)	20 Amp with 20 Amp. C Curve SP MCB. (for 1.0Tr /1.5 Tr High wall split AC's and UPS output/separate connection of record room/safe room/ chest room etc as required )	4	no.		
b)	20 Amp with 30 Amp. DP MCB for Acs (for 2.0 TR Cassette AC's )	2	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	job		
6	<b>Basic electrical Wiring of light points, plug points</b>				
	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. Rate of all points 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 )(Wires Make: Havells/ RR Kable / KEI/Finolex) (Switches : Make: Anchor/Crabtree/North-West/MK)				
a)	single 6 Amp Switch controlling 1 light point for T-5, Wall Fans, exhaust Fans , Ceiling fan and other separate room supply only	16	no.		
b)	single 6 Amp Switch controlling 4 no. downlights / 4 no. LED downlight / 2 no. 2'- 0"x 2'-0" 36 watt light fittings	19	no.		
c)	single 6Amp socket controlling by 5Amp Modular switch in switch boards etc complete as required	12	no.		
	<b>Note: Lihgts/fans points to be calculated by numbers of lights and no extra cost shall be paid for dummy switch.)</b>				

	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
<b>PART-II : PANELS , KIT KATS &amp; CABLES</b>					
7	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	job		
8	<b>MAIN SUPPLY PANEL:</b> 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 160 Amp 4P , Model-DU250 Series, L&T make				
	160 Amps capacity 4 strips Aluminium bus bars.				
	OUTGOING				
	1 nos MCCB Breaking Capacity 16 KA 100 Amp 3P with seprate neutral Link, DU Series, L&T make.	1	set		
9	<b>EMERGENCY PANEL ON DG:</b> 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 160 Amp 4P , Model-DU250 Series, L&T make				
	1 no 0 -500V digital Voltmeter in separate compartment and digital Amp meter and one set of CTs ( 3 Nos ) with CT Ratio 100/5 A with LED type phase Indication Lamps with protection fuses in a separate compartment				
	160 Amps capacity 4 strips Aluminium bus bars.				
	OUTGOING				

	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
	1 nos MCCB Breaking Capacity 16 KA 63 Amp 3P and 3 nos MCCB Breaking Capacity 16 KA 40 Amp 3P with seprate neutral Link, DU Series, L&T make.	1	set		
<b>10</b>	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). <b>(Make: Havells/ RR Kable / KEI/Finolex/Pymen)</b>				
a)	3.5X35 sq. mm aluminum conductors armoured cable with two Nos. 8 SWG GI wire	35	mtr.		
b)	3.5X25 sq. mm aluminum conductors armoured cable with two Nos. 8 SWG GI wire	75	mtr.		
c)	3X6 sq. mm <b>copper conductors armored cable</b> with one Nos. 8 SWG GI wire	45	mtr.		
d)	3X2.5 sq. mm <b>copper conductors armored cable (Metal Clad or Modular AC points to be provided adjacent to the Acs.</b>	75	mtr.		
<b>11</b>	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 grade as required.				
a)	3.5X35 sq.mm aluminum conductor	2	no.		
b)	3.5X 25 sq.mm aluminum conductor	5	no.		
c)	3X6 sq. mm Copper cable gland.	4	no.		
d)	3X2.5 sq. mm Copper cable gland.	25	no.		
<b>12</b>	Supplying & fixing the <b>1 no.4 pole 200 Amps capacity change over switch</b> and complete connection with Electrical Panels as required <b>.Make: Havells/HPL/Standard/ Legrand/L&amp;T</b>	1	no.		
<b>13</b>	Making necessary provisions for keeping the branch in working condition by providing or maintaining temporary electrical points for the computers & lightings etc. as per the direction of the Engineer-in charge including the costs of the material, labour and dismantling.	1	Job		
<b>14</b>	<b>UPS DISTRIBUTION BOARD</b>				
	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 requd. <b>Make: Havells/HPL/Standard/ Legrand/L&amp;T</b> as per details below :-				
a	4 way DB comprising of 2 no. 63 amp DPMCB ( <b>UPS out put</b> )	2	each		

	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
<b>b</b>	4 way TPND B Double Door comprising of 1 no. incoming 63 amp 4P MCB & 3 no. 32 DPMCB ( <b>UPS input</b> )	1	each		
<b>15</b>	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 required.				
	2 X 6 Sq mm with 1 no suitable insulated 2.5 sq mm multi stranded copper wire in PVC flexible pipe. ( <b>Make: Havells/ RR Kable / KEI/Finolex</b> )	20	mtr.		
<b>16</b>	<b>EARTHING</b>				
	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	Sets		
	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		
<b>17</b>	a)Supply fixing and termination of 20X3 mm copper strip with earth station below ground level etc as required.	15	Meter		
	b)Supply fixing and termination of 20X3 mm G.I strip with earth station below ground level etc as required.	25	Meter		
<b>18</b>	a)Providing and fixing of 8 SWG copper earth wire in the recess for loop earthing etc. as required.	30	Meter		
	b)Providing and fixing of 8 SWG GI earth wire in the recess for loop earthing etc. as required.	50	Meter		
<b>19</b>	Supply and laying following dia 25 mm in thickness ISI Mark PVC pipe under floor or in recessed walls from earth electrode to UPS room for computer <u>dedicated earthing</u>				
	25 mm diameter	70	Meter		
<b>PART IV - TELPHONE &amp; DATA CABLE</b>					
<b>20</b>	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./PVC 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 read. ( <b>Make: Dqlink/KEI/Finolex</b> )	8	no.		

	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
21	Supply, installation and testing & commissioning of Tag Block 10 pair for telephone connections <b>Make: krone</b>	1	no.		
22	Providing , Laying, testing & commisioning of 10 pair telephone cable from outside govt. / bsnl DB to Rack for lease line, ISDN of <b>Make: Delton, finolex, polycab.</b>	90	mtr.		
23	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 complete as reqd. (Make: D-Link/MOLEX/AMP/COMMSCOPE). <b>Note: Only One Data Points to be provided in One Table/Counter. Extra poitns not to be paid if provided . Maximum 6 no. data cable must be run in one pvc pipe.</b>	14	no.		
24	supply, installation, testing and commissioning of 24-port Patch Panel	1	no.		
25	Supply and installation, testing and commissioning of mounted rack 15" hight made of powder coated MS sheet	1	no.		
26	supply, installation, testing and commissioning of factory manufactured CAT-6e patch chord complete with 2 no. connectors etc. complete as reqd.				
a)	1 mtr. long	14	no.		
b)	2 mtr. long	14	no.		
	<b>PART-V : LIGHTS &amp; FANS FIXTURES</b>				
27	SITC of 2"x2" 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. <b>Make Philips or equivalent of Wipro / Bajaj.</b>	20	no.		
28	SITC of 15 watt LED fixtures dowlighters 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. <b>Make Phillip/ Wipro / Bajai.</b>	35	no.		
29	SITC of 5 watt recess mounted <b>LED down light</b> with assembly complete with including making necessary 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. <b>(Make : Philips/Wipro/ Bajaj)</b>	8	no.		

	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
30	SITC of 18 watt of T5 LED fixtures directly on ceiling / wall including making necessary connections with 2x1.5 sq.mm insulated copper cable conductor wire etc. complete as reqd <b>Make Phillips / Wipro / Bajaj.</b>	6	no.		
31	LED Strip light (4.5/5 watt) for cove (Make Phillips /Wipro / Bajaj Complete in all respects with suitable drivers	35	MTR.		
32	SITC of 1200 mm CEILING fans complete as reqd. (M/s Crompton High Breeze or equivalent of USHA / Bajaj).	1	no.		
33	SITC of 200 mm exhaust fans complete with self opening louvers / shutters including necessary frame etc, complete as reqd. (M/s Crompton High Breeze or equivalent of USHA / Bajaj)	3	no.		
34	SITC of 30 Watt street light complete as reqd. (M/s Crompton High Flo or equivalent of Khaitan / Bajaj)	2	no.		
	<b>PART-VI : AIR CONDITIONING REFRIGERATION/DRAIN WORKS</b>				
35	Supplying & Laying of following COPPER REFRIGERANT PIPING Thickness 22 SWG For Air Conditioners units 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. <b>(Make: Total Line/Armaflex)</b>				
a)	1/4" + 1/2" Refrigerant Copper piping - For Hiwall Split AC's (1.0Tr / 1.5Tr )	36	mtr.		
b)	5/8" + 3/8" Refrigerant Copper piping - For HWS/Cassette AC ( 2.0Tr)	30	mtr.		
36	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. <b>(Make: Diplast/Supreme/Aashirvaad)</b>	65	mtr		
37	Supplying and providing Eletrical flexible FRLS Copper cable of 3 x 2.5sq.mm multi strand suitable for 1.0Tr / 1.5 Tr H.W Split / 2.00 Tr Cassette Multi-runs between Indoor & Outdoor units and between Metal Clads to Out door for electrical supply etc complete as required <b>(Make: Havells/PP Kable / KET/Finolex)</b>	120	mtr		
	<b>TOTAL OF PART : I +II+III+IV (A)</b>				<b>0.00</b>
	<b>TOTAL OF PART : V+VI (B)</b>				<b>0.00</b>
	<b>TOTAL AMOUNT (A+B)</b>				<b>0.00</b>
	<b>Add GST @ 18% on Total as applicable</b>				

Note: the vendor have to provide LAN diagram after completion of the work along with the bill, without it payment will not be made.