

<b>Bill of Quantities for Electrical Works at Proposed State Bank of India Branch at IIT. KAMAND, MANDI BRANCH</b>					
<b>S.No.</b>	<b>Item / Specifications</b>	<b>Qty.</b>	<b>Units</b>	<b>Rate</b>	<b>Amount</b>
<b>PART-I : COMPUTER POINTS &amp; DISTRIBUTION</b>					
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 (avaerage 7mtr cable per point).. <b>Note: Maximum two computer points are to be provided on one circuit. (Switches : Make: Anchor/Crabtree/North-West/MK</b>	13.00	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 requiredfor printer and BMcabin./ATM	5.00	each		
3	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 copper wire in PVC flexible pipe. <b>(Make: Havells/ RR Kable / KEI/Finolex)</b>	30.00	mtr.		
4	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/ Hager/ Legrand/L&amp;T</b>				
a)	8 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 6 No SPMCB 10/16 Amp. ( UPS output)	2.00	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.	1.00	no.		
d)	6 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 63 A FP MCB and 18 Nos. 6/10 Amp SPMCBS with 63 Amp ELCB 30 MA etc complete as required. <b>(for Light, Fan point).</b>	1.00	no.		
e)	4 way TPDB comprising of 1 no. 63 Ampere 4 Pole Isolator and 12 nos. 6-20 amp SPMCB C Series. ( For Heating Points )	1.00	no.		
5	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 25 Amp. C Curve SP MCB. (for UPS OUTPUT AND 1.5 TR AC's ) <b>Make: Havells/HPL/Standard/ Hager/Legrand/L&amp;T</b>	11.00	no.		
6	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		
7	<b>Wiring of light points, plug points &amp; power 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. <b>(Make: Havells/ RR Kable / KEI/Finolex)</b>				

	(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)	6 Amp Switch controlling 1 light point	15.00	no.		
b)	6 Amp Switch controlling 4 no. downlights or 2 no. 2'-0"x 2'-0" 36 watt light fitting	30.00	no.		
c)	Primary Wall fan point controlled by 5 AMP socket controlled by 5amp switch	16.00	no.		
	<b>Note: Lihgt points to be calculated ny numbers of lights and no extra cost shall be paid for dummy switch.)</b>				
d)	Raw Power point with 15amp socket controlled by 15 Amp switch with seprate wiring of 2.5 Sq.mm from DB.	4.00	no.		
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		
<b>PART-II : PANELS &amp; CABLES</b>					
8	<b>Main 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:				
	<b>INCOMING</b>				
	1 no MCCB Breaking Capacity 25 KA 200 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 200/5 A with LED type phase Indication Lamps with protection fuses in a separate compartment				
	200 Amps capacity 4 strips Aluminium bus bars.				
	<b>OUTGOING</b>				
	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		
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). <b>(Make: Havells/ RR Kable / KEI/Finolex/Pymen)</b>				
a)	3.5X50 sq. mm aluminum conductors with two Nos. 8 SWG GI wire	30.00	mtr.		
b)	3.5X25 sq. mm aluminum conductors with two Nos. 8 SWG GI wire	70.00	mtr.		
c)	3X6 sq. mm <b>copper armored cable</b> .with one No. 8 SWG GI wire	30.00	mtr.		
d)	3X2.5 sq. mm <b>copper armored cable</b> .	30.00	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 grade as required.				
a)	3.5X50 sq.mm aluminum conductor	3.00	no.		
b)	3.5X 25 sq.mm aluminum conductor	4.00	no.		
c)	3X6 sq. mm Copper cable gland.	4.00	no.		
d)	3X2.5 sq. mm Copper cable gland.	20.00	no.		
12	<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/ Hager/ Legrand/L&amp;T</b> as per details below :-				
a	4 way DB comprising of 2 no. 63 amp DPMCB (UPS out put)	2	each		

b)	4 way TPNCB Double Door comprising of 1 no. incoming 63 amp MCB & 3 no. 32 DPMCB	1	each		
13	Supply and fixing the <b>1 no.4 pole 200 Amps capacity change over switch with adaptor box</b> 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 . <b>Make: Havells/HPL/Standard/ Hager/ Legrand/L&amp;T</b>	1.00	no.		
14	<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		
15	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		
16	a)Providing and fixing of 8 SWG copper earth wire in the recess for loop earthing etc. as required.	40	Meter		
	b)Providing and fixing of 8 SWG GI earth wire in the recess for loop earthing etc. as required.	80	Meter		
17	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		
<b>PART-III AIR CONDITIONING WORK</b>					
18	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. <b>(Make: Total Line/Armacell)</b>				
	1/4" + 1/2" Refrigerant piping - For Hiwall Split AC's	75.00	mtr.		
19	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)</b>	50.00	mtr		
20	Electrical flexible cable of 3x2.5sq.mm multi strand suitable for 1.5 Tr H.W Split & 1.00 Tr H.W Split. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. <b>(Make: Havells/ RR Kable / KEI/Finolex)</b>	100.00	mtr		
<b>PART IV - TELEPHONE &amp; DATA CABLE</b>					
21	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. <b>(Make: Dglink/KEI/Finolex)</b>	7.00	no.		
22	Supply, installation and testing & commissioning of Tag Block 20 pair for telephone connections Make krone	1.00	no.		
23	Providing , Laying, testing & commissioning of 10 pair telephone cable from outside govt. / bsnl DB to Rack for lease line, ISDN of <b>Make: Delton, finolex, polycab.</b>	20.00	mtr.		

24	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.,	15.00	no.		
	testing and ferruling (D-Link/MOLEX/AMP/COMMSCOPE). Note: maximum 6 no. data cable must be run in one pvc pipe.				
25	supply, installation, testing and commissioning of 24-port Patch Panel	1.00	no.		
26	Supply and installation, testing and commissioning of mounted rack 15" high made of powder coated MS sheet	1.00	no.		
27	supply, installation, testing and commissioning of factory manufactured CAT-6e patch chord complete with 2 no. connectors etc. complete as reqd.				
	1 mtr. long	15.00	no.		
	2 mtr. long	10.00	no.		
<b>PART-V : SUPPLY, INSTALLATION TESTING &amp; COMMISSIONING OF FANS &amp; FIXTURES</b>					
28	SITC of 2'x2' Ceiling grid 30 watt LED 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.	6.00	no.		
29	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. Make Phillips cat no. DN - 192 - 1000 or equivalent of Wipro / Bajaj.	29.00	no.		
30	SITC of 5 watt recess mounted <b>LED down light</b> with assembly complete with including making necessary connections etc. Complete as reqd. ( M/s Crompton Cat No. Or equivalent of Philips/Wipro/ Bajaj)	4	no.		
31	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 Make Phillips cat no. DN - 192 - 1000 or equivalent of Wipro / Bajaj.	2.00	no.		
32	Supply of Metal Body Orient Electric Wall Fan 450mm Tornado Wall- Black Metal/Crompton greaves ( or equivalent) SDX BLCK GOLD wall fan etc. 1325 rpm High Flow Model with 3 Pin Plug complete as required. (M/s equivalent of Bajaj / Havells/Usha )	10.00	no.		
33	LED Strip light (4.5/5 watt ) for cove (M/s Phillips /Wipro / Bajaj Complete in all respects with suitable drivers	20.00	MTR.		
34	SITC of 30 watt Street light /Flood light for lighting the front side of the branch(M/s Crompton Cat No. LSTS-30-CDL or equivalent of Philips/Wipro .	2	no.		
35	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).	2.00	no.		
<b>TOTAL OF PART I - IV (A)</b>					
<b>TOTAL OF PART - V (B)</b>					
<b>TOTAL Part - A + B</b>					