

BOQ FOR ELECTRICAL INSTALLATION WORKS IN SBI AT SHAHPUR CHOWK BRANCH PATHANKOT .

S.NO	DESCRIPTION OF ITEM	QTY.	UNIT	RATE	AMOUNT
PART-A					
UPS & AC POWER DISTRIBUTION					
1	Supply all materials receiving, storing, handling, fixing computer points with suitable size GI box with modular plate and cover in front including providing and fixing 3 No. 5 amp 3 pin modular socket under the table and controlled by 1 No. 15 amp modular switch with indicator above the table in seprate GI box with modular plate & cover, connection end terminations with suitable size of glands etc. complete as reqd. including 3x2.5 sq.mm copper armoud cable Note:- Only two UPS computer points are to be provided on one circuit, (Switch & indicator for these computer pts shall be fixed above toable on side partition) (Extra point on table to be decided by Architect /Bank Engineer) (Switches: Make Anchor/Crabtree/North-West/Legrand)	26	Each		
2	Supply all materials receiving, storing, handling, fixing computer points with suitable size GI box with modular plate and cover in front including providing and fixing 1 no. 15 amp 5 pin modular socket controlled by 1 no. 15 amp modular switch with indicator, connection end termination with suitable size of glands including 3x2.5 sq.mm copper armoud cable etc. complete as reqd. (For Raw power point only to be taken from Raw Power DB directly) Extra point on table to be decided by Architect /Bank Engineer)	10	each		
3	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required. (for AC & UPS Output only)	6	no.		
4	Supplying and fixing 32 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 25 A "C" curve, DP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required. (For AC only)	6	no.		
5	Supply, installation, testing & commissioning of factory fabricated distribution board rust inhibited, powder coated sheet sheet fabricated comprising of incoming & outgoing isolator & M.C.B's neutral link or neutral bus,top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as reqd. as per details below:- (Make : Havells/HPL/Standard/hager/Legrand/L&T				
a)	6 way MCBDB comprising of 1 no. 63 amp isolator and 4 no. 6/10amp MCBs etc. complete as reqd. (ATM & B.M)	2	Each		
b)	10 way MCBDB double door in recessed wall including cutting of wall and making good the damages comprising of 1no. 63amp isolator and 4no. 6/10amp MCBs 2Nos DPMCB complete as reqd. (For ATM RAW POWER Supply)	1	Each		
c)	10 way MCBDB double door in recessed wall including cutting of wall and making good the damages comprising of 1no. 63amp isolator and 8 no. 6/10amp MCBs etc. complete as reqd. (UPS Supply For Banking Hall)	2	Each		
d)	4 way TPDB double door comprising of 1 no. incoming of 30Amp ELCB & 12	1	Each		

	nos.6/10Amp SPMCB etc. complete as reqd. (For Lighting AND Fan distribution)				
e)	4 way TPDB double door comprising of 1 no. incoming 30 amp ELCB and 12 nos. 20/25Amp SPMCB etc. complete as reqd.(For Raw power distribution only)	1	Each		
f)	4 way TPDB double door comprising of 1 no. incoming 100 amp isolator & 6 nos. 32DPMCB etc. complete as reqd.(For AC's distribution: 1Raw power supply & 1 onGenerator supply)	2	Each		
PANELS & CABLES					
6	Providing & fixing 3 No. 200 amp kitkats (fuse carrier & base) with 1 no. neutral link on suitable size of backalite sheet of thickness not less than 6 mm etc. complete as reqd.	1	job		
7	SITC of panel fabricated with 16 S.W.G.M.S. sheet. The panel shall be free standing type totally enclosed dust & vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, G.I. earth bus bar, bus bar chamber cable alleys interconnections with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of bus bars. The panel shall be painted with 2 coats of enamel paint (grey shade)over the primer and shall also be provided with designation of incoming & outgoing feeder as per details below:-				
INCOMING					
a)	1 no. MCCB breaking capacity 36KA 160 amp- 4P				
b)	1 set of 200 amp 4 strips aluminium bus bar chamber				
c)	1 no. 0-500V Digital Voltmeter & Digital Ammeter with one set of CTs (3no.) with CT ratio 200/5 A with LED type indication lamps with protection fuses in separate compartment				
OUTGOING					
a)	1 no MCCB breaking capacity 25 KA 125 amp 4P (For Essential Panel)				
b)	3 no MCCB breaking capacity 16 KA 100 amp 3P with suitable neutral link (1 For AC DB, 1 for POWER DB & 1 Spare)	1	set		
8	ESSENTIAL PANEL: SITC of panel fabricated with 16 S.W.G.M.S. sheet. The panel shall be free standing type totally enclosed dust & vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, G.I. earth bus bar, bus bar chamber cable alleys interconnections with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of bus bars. The panel shall be painted with 2 coats of enamel paint (grey shade)over the primer and shall also be provided with designation of incoming & outgoing feeder as per details below:-				
INCOMING					
a)	1 No. 125 amp 25KA 4P MCCB (Make : L&T/GE/ABB)				
b)	1 set of 200 amp TPN aluminium busbar chamber				
c)	1 no. 0-500V Digital Voltmeter & Digital Ammeter with one set of CTs (3no.) with CT ratio 200/5 A with LED type indication lamps with protection fuses in separate compartment				
OUTGOING					
a)	4 No. 63 amp 16KA 3P MCCB with suitable neutral link (Light DB's, UPS & 1 Spare)				
b)	2 No. 100 amp 16KA 3P MCCB with suitable neutral link (for AC, Power DB onGenerator & 1 Spare)	1	set		
9	Supply, installation, testing & commissioning of PVC insulated PVC sheathed armored cable of 1100 V (IS-1554 part I) and fixing of cable on wall with suitable size of clamps/ saddles or laid in floor/recess wall including				

	cutting of floor/wall and making good the damages etc. complete as reqd. of following sizes:- (Make:Havelles/KEI/Legrand/Finolex/Pymen only)				
a)	3.5 x 70 sq.mm. aluminium conductor with 2 no. 8 SWG G.I. wire	50	Per mt.		
b)	3.5 x 50 sq.mm. aluminium conductor with 2 no. 8 SWG G.I. wire	40	Per mt.		
c)	3.5 x 25 sq.mm. aluminium conductor with 2 no. 8 SWG G.I. wire	70	Per mt.		
d)	3.5 x 16 sq.mm. aluminium conductor with 2 no. 8 SWG G.I. wire	150	Per mt.		
e)	3x6 sq.mm. Copper conductor with 1 no. 8 S.W.G. GI wire (for UPS DB's only)	40	permt r.		
f)	3 x 2.5 sq.mm. insulated copper conductor	30	Per mt.		
10	End termination with Brass compression glands including providing lugs/ferruls and making necessary connections etc. complete as reqd. of following sizes:-				
a)	3.5 x 70 sq.mm. aluminium conductor	4	Each		
b)	3.5x 50 sq.mm. aluminium conductor	4	Each		
c)	3.5x25 sq.mm. aluminium conductor	6	Each		
d)	3.5x16 sq.mm. aluminium conductor	4	Each		
e)	3x6 sq.mm. Copper conductor	6	Each		
f)	3 x 2.5 sq.mm. insulated copper conductor	32	Each		
11	Providing & fixing suitable size of angle iron frame suitable for installation on wall/floor including grouting of frame & painting etc. complete as reqd. comprising of following:-				
a)	1 No. 4 pole 160 amp capacity changeover switch (Make : Havells/HPL/Standard/hager/Legrand/L&T)	1	job		
	UPS DISTRIBUTION				
12	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 on wall 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 100 amp MCB & 6 nos. 32 AMP DPMCB (UPS input)	2	Each		
13	Providing and laying following sizes of PVC insulated copper conductor flexible wire of 1100V in flexible/solid PVC conduit etc. including making necessary connection complete as reqd.				
a)	2x6 sq.mm with 1.5 sq. mm copper PVC insulated earth wire (For UPS input & output connections) (Make : Havells/Legrand/ KEI/Finolex)	20	permt r.		
14	Earth Box: Providing and fixing suitable size of MS box fabricated with 16 S.W.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 5mm Bakelite sheet on base connector strip and painting of box etc complete as reqd.	1	job		
15	Basic lights and fans Point Wiring				
	Supply all material, receiving, storing, fixing, laying wiring & testing the same for light, ceiling fan, exhaust fan, 6A socket; starting from the point control box to out let; using 1.5 sqmm copper conductor PVC insulated 1100V grade wiring cable in concealed system using 20/25/32 mm ISI marked PVC conduit including all conduit accessories like conduit bends, tees, draw boxes, fan hookes etc., where ever required, together with wiring accessories such as flush type moedular& flush type sockets, point control boxes,PVC bushes for conduit ends, batten holders, chrome plated brass screws including 1 sqmm copper PVC insulated earth wire, identification ferrules at either ends, complete in all respect. Conduit being concealed either in ceiling/ wall chase or on surface, including making & filling chases with cement mortar & painting the surface conduit etc. complete as reqd.				

	Rates include providing & fixing modular switches & sockets with switch boxes and plate etc. complete (Rates include 3x2.5 sq.mm copper conductor PVC insulated wiring laid in PVC pipe for circuit wiring).				
a)	Single 6 amp switch controlling 1 light point for T-5, exhaust fans, ceiling fan and other separate room supply only.	22	Each		
b)	Single 6 amp switch controlling the four downlighters OR 4 No. LED downlight / Two 2x236 watt light fittings(No. of Lights to be counted for lights points calculations)	24	Each		
c)	Single 6 amp socket controlling by 5 Amp modular switch in switch boards and for wall fans etc. complete as required.	30	Each		
	Note :- Lights / fans to be calculated by number of lights and no extra cost shall be paid for dummy switch.				
	EARTHING				
16	Copper plate earthing: Supply, fixing and termination of Copper plate of size 600x600x3mm thick with 5 mtr length 20x3mm size copper strip below ground level including all accessories such as watering pipe & funnel and providing masonry enclosure at top with cover plate i/c excavation of pit, supplying & filling of salt charcoal, refilling of pit etc complete as reqd as per IS 3043-1987. The voltage between neutral & earth must be below 1 volt.	1	set		
	GI plate earthing: Supply, fixing and termination of GI plate of size 600x600x3mm thick with 5 mtr length 20x3mm size GI strip below ground level including all accessories such as watering pipe & funnel and providing masonry enclosure at top with cover plate i/c excavation of pit, supplying & filling of salt charcoal, refilling of pit etc complete as reqd as per IS 3043-1987. The voltage between neutral & earth must be below 1 volt.	2	set		
17	a) Providing & fixing 8 S.W.G copper earth wire on surface or in recess for loopearthing from earth station to earth box at UPS Room etc.as reqd.	50	mtr.		
	b) Providing & fixing 8 S.W.G G.I. earth wire on surface or in recess for loopearthingetc.from earth station to electrical panels as reqd.	70	mtr.		
18	Supply & laying of 25mm dia 2 mm in thickness PVC pipe under floor or in recessed walls from earth electrode to UPS room for computer dedicated earthing and electrical panels, etc. making good the damages etc. wherever reqd. (ISI Marked)	120	mtr.		
	TELEPHONE				
19	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 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 reqd. (Make : DGLink/KEI/Finolex)	18	no.		
21	Tag Block : Supply, Providing & installing 20 pair PVC Tag Block in hinged type complete as reqd.	1	no.		
	DATA CABLING WORK				
22	Data cabling work for computer networking starting from mounting rack at suitable position of banking hall 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., testing and ferruling (D-LinK/MOLEX/AMP/COMMSCOPE) . Note: Only single Data point to be provided in each table, 2 data point to be provided in BM Table and to maximum 6 no. data cable must be run in one PVC pipe.	27.00	no.		
23	Providing, fixing, testing and commissioning of 32-port Patch Panel	1.00	no.		
24	Providing, fixing, testing and commissioning of mounted rack 15" hight made of powder coated MS sheet	1.00	no.		
25	Supply, installation, testing and commissioning of factory manufactured CAT-6e patch chord complete with 2 no. connectors etc. complete as reqd. (Make : D-LinK)				
a)	1 mtr. long	27.00	no.		
b)	2 mtr. long	27.00	no.		

AIR CONDITIONING WORK FOR SPLIT AC's					
26	Supplying & Laying of following COPPER REFRIGERANT PIPING Thickness 22 SWG For Hiwall Split AC complete with fittings Suction / Discharge line insulated with 12 mmSUPERLON / ARMAFLEX suction line. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. (Make Total Line/ Armacell)				
	5/8" + 3/8" Refrigerant piping - For Cassette AC's	150.0	mtr.		
	1/4" + 1/2" Refrigerant piping - For Hiwall Split AC's	120.0	mtr.		
27	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)	100.0	mtr		
28	Supplying & laying of Eletrical flexible cable of 4x2.5sq.mm multi strand suitable for 2.0 Tr ,1.5 Tr& 1.00 Tr H.W Split/Cassette unit between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. (Make : Havells/Legrand/KEI/ Finolex)	140.0	mtr		
29	Supplying & laying of Eletrical flexible cable of 3x2.5sq.mm multi strand suitable for 2.0 Tr ,1.5Tr& 1.00 Tr H.W Split/Cassette unit between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. (Make : Havells/Legrand/ KEI/ Finolex)	140.0	mtr		
30	Charges for keeping the office/branch operational with temporary connections of UPS, Data Cabling, Telephone, raw power supply to lights, fans etc. as per requirements of the office during the renovation period	1.00	Job		
TOTAL PART-A					
PART- B					
SUPPLY OF FANS & FIXTURES					
1	Supply, Installation, testing and commissioning of 33-36 watt LED Light above 100 lm/watt fitting complete including necessary connection from 2x1.5sq.mm copper wire in ceiling etc. as reqd. (Make : Philips / Wipro / Havells)to be provided as per drawing	30	no.		
2	Supply, Installation, testing and commissioning of recess down lighter with assembly complete with 15watt LED Light above 85 lm/watt including necessary connection from 2x1.5sq.mm copper wire in ceiling etc. as reqd.. ((Make : Philips / Wipro / Havells)	80	no.		
3	SITC of 400 mm sweep wall fan etc. complete as reqd. (M/s Crompton High Flo Wave Plus400-MM / Khaitan / crompton)	20	no.		
4	SITC of 18/20 watt LED Batten above 90 lm/watt including necessary connection from2x1.5sq.mm copper wire in ceiling etc. as reqd (Make : Philips / Wipro / Havells)	12	no.		
5	4.5/5 Watt LED strip light for cove with Driver (M/s. Philips Wipro / Havells) Complete in all respects.	90	mtr		
6	SITC of 56" sweep ceiling fans complete with regulator, hanging shackle & suitable down rod as per site conditioning complete as reqd. (M/s Crompton high breeze Crompton Aura1400 mm (56 inch) High Speed or equivalent of USHA / Havells)	1	no.		
7	SITC of 300 mm exhaust fans complete with self opening louvers/shutters etc. complete with suitable wooden/iron frame as reqd. (M/s Crompton Cross air or equivalent of USHA / Havells)	7	no.		
TOTAL PART-B					
TOTAL PART-A					
TOTAL PART-B					
SUB TOTAL					
Add GST on G.Total @18% Extra					
Note: 1) Independent circuit for Raw power plug and A.C point is to be provided starting from MCB					

distribution Box.

2) Make of individual items have been mentioned in BOQ any other list will not be consider
Layout of Electrical
Cabling, LAN Wiring, Earthing to be marked on drawing by vendor.