TEND	ER & SPECIFICATIONS FOR PROPOSED ELECTRICAL		AT NAGD	A BRANCH	<u>&amp; E- LOBBY</u>
S.No.	UJJAIN-REGION DESCRIPTION OF WORKS	) UNIT	QTY	RATE	AMOUNT
1	Wiring for light point/ fan point/ wall fan point/ exhaust		<b></b>		
	fan/ light sockets etc. with 1.5 sq.mm. PVC insulated				
	1100 V Grade copper conductor (FRLS) wires & 1.5				
	sq.mm. copper earth wire in concealed/ surface using 16				
	SWG MS conduits, accessories such as bends, tees,				
	saddles, draw boxes, mounting boxes, inner plates, cover				
	plates, ceiling rose etc (whereever required) and				
	chromium plates brass screws/ rowel plug etc. The				
	circuit wiring starting from DB to point control box/ switch				
	box using 2 X 2.5 sq.mm PVC insulated 1100 V grade				
	multi- stranded copper conductor wire & 2.5 sq.mm. PVC				
	insulated earth wire (color code to be used). (Flexible				
	conduit/ elbow not allowed). The conduit to be laid in				
	ceiling with proper clamps/ wall/ floor and filing the				
	chase with cement mortar and finishing the same in				
	original form/ wooden partition/ above false ceiling with (Wherever required as per standard specifications).				
	i) Each circuit shall have independent earth wire.				
	ii) Each point shall be earthed.				
	iii) Circuit wiring is to be included in point wiring rates.				
i	One light points controlled by one 6 amp. Modular switch.	Nos.	75.00		
ii	Two light points controlled by one 6 amp. Modular switch.	Nos.	15.00		
iii	Three light points controlled by one 6 amp. Modular	Nos.	5.00		
iv	Smitchall bell point with ceiling rose/ 6amp. 3 pin socket	Nos.	1.00		
	controlled by one 6 amp. Push Modular switch. With call				
v	One wall fan/ ceiling/ exhaust fan point with 6 amp 3-pin		3.00		
	socket controlled by one 6 amp. Modular switch. The				
	switch should be at switchboard level.				
vi	Celing fan point with one nos 6 amp switch and 2 module	Nos	23.00		
	electronic regulator including wiring & ceiling rose				
vii	One 5 pin socket controlled by one 6 amp. Modular				
	switch complete assembly includes plate box etc.	Nee	20.00		
a	same board	Nos.	20.00		
viii	Same as serial no 1 but using 2*2.5 + 1*2.5 Sqmm				
	Copper Conductor FRLS wires from DB to first 6A, 5 Pin				
	modular socket controlled by one 6A switch and looped				
	to the nearest second point with same $2*2.5 + 1*2.5$				
	Sqmm copper conductor wires FRLS insulated 1100V				
	grade (max 3 points per circuit).				
а	Primary Point	Nos.	10.00		
b	Secondary Point looped	Nos.	6.00		

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
2	POWER POINTS				
	Same as serial no.1, but wiring for 16 Amp, 6-pin sockets by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire with independent 1* 4.0 sq.mm earth wire from D.B. to first point 1 <sup>st</sup> socket and 1 <sup>st</sup> to 2 <sup>nd</sup> , socket with 2*2.5 sq.mm. and 1*2.5 earth wire including providing and fixing of 16 Amp, 6 –pin socket with 16 Amp. Switch. (Modular type switch/ socket/ plate etc. complete assembly) max 2 points per circuit.		(0.00)		
<u>a)</u>	Primary Point	Nos.	12.00		
b)	Secondary Point	Nos.	6.00		
3(a)	Same as serial no.1, but wiring for A/C socket by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*4.0 sq.mm. PVC insulated 1100 V grade copper conductor wire with modular type AC box(tiny trip type) with socket complete in all respects controlled by 25/32 A SP MCB to be provided near indoor unit. The point starts from DB to stabilizer to the point near the indoor unit including top.		5.00		
B.	Same as serial no.1, but wiring for A/C socket by using 4*6 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*6.0 sq.mm. PVC insulated 1100 V grade copper conductor wire of weather proof type 4 way SPN DB complete in all respects controlled by with 40 Amp TPN (10 KA) MCB to be provided near outdoor unit. The point starts from DB to the point near the outdoor unit. (includes wires for terminal connection of outdoor unit from TPN)		3.00		
4	COMPUTER POINTS				
a	Wiring with 2x2.5 sq.mm. + 1x2.5 sq.mm. PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 3 nos. 6 amps. 5 pin modular type sockets, one 6 amps modular swtich with all accessories, inner/ outer plates, metal box etc. and to be fixed on wooden partitions/ by grouting on wall etc. as per requirement at site. The switch should be fixed above the top of counter with indicator and sockets under the counter b) Same as above but looped from the above 1st point to 2nd , point and 2nd point to 3rd point. (Maximum 3 points Primary Points		10.00		
	Secondary Points	Nos.	6.00		
		1103.	0.00		
			1	1	

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
В.	CONDUITING FOR TELEPHONE, COMPUTER &				
	CONDUITING, WIRING FOR T.V. SYSTEM.				
1.0	TELEPHONE SYSTEM				
	Wiring for VOICE from Jack Panel in data rack to computer workstation with Cat-6 voice cable in PVC conduits of size 20/ 25 mm including providing ferrules at both ends and termination at both ends including providing & fixing frame for Cat-6 with shutter, RJ 45 outlet, faceplate and mounting box complete of modular type. This work includes supply and laying of CAT-6 cable in PVC conduits throughout the lenght, from the I/O	Nos.	12.00		
	Supplying, laying, effecting terminations, testing and commissioning of 0.51 mm dia Cu. Conductor, twisted, colour coded with polythene capor barrier, telephone cables in the existing tray or in conduit including providing &fixing conduit pipe or cable tray as required from building tag block to the floor as required.				
a)	Supplying & fixing 20 pair krone tag block with enclosure.	Nos.	1.00		
b)	P/L 10 Pair of PVC insulated PVC sheathed multi core jelly filled armored telephone.	Mtrs.	10.00		
2	COMPUTER NETWORKING				
	Wiring for computer networking from Jack Panel in data	Nos.	30.00		
	rack to computer workstation with Cat-6 computer cable in PVC conduits of size 20/ 25 mm including providing ferrules at both ends and termination at both ends including providing & fixing frame for Cat-6 with shutter, RJ 45 outlet, faceplate and mounting box complete of modular type, This work includes supply and laying of CAT-6 cable in PVC conduits throughout the length, from				
	Supplying and fixing 9 U (Rack with glass door, opening in the front power panel 1 (horizontal), cable manager 1 lock & key).	Nos.	1.00		
2.3 a	Supply, Installation, Testing & Commissioning of 24 port Jack Panel.	Nos.	1.00		
2.3 b	Supply, Installation, Testing & Commissioning of 16port Jack Panel.	Nos.	1.00		
	Supplying and fixing Patch Cord-2 Meter- (DBPS Mounting Cord)	Nos.	30.00		
	Supplying and fixing Patch Cord-1 Meter-	Nos.	30.00		
	Supply and fixing of 1.6 mm thick G.I. Box along with RG 6 T.V Co axial socket with Cover Plate.	Nos.	1.00		
4.0	Supply, drawing, connecting, testing and commissioning of T.V Coaxial cable RG 6 in existing conduit.	RM	10.00		
C.	CABLES, MAINS & SUBMAINS				
1	Supplying all materials and laying/ pulling 1100 volts grade PVC insulated copper conductor wires (FRLS) in MS conduit with all fixing accessories after cutting the floor, wall and the like etc. and replastering the floor level to original. Conduit must be 30 mm below the floor finish				
i	1 X 10 sq mm Cu wire for earthing.	RM	20.00		
		RM	5.00		1
ii iii	2 X 6 sq.mm. + 1 X 6 sq.mm. 4 X 6 sq.mm. + 2 X 6 sq.mm.	RM	5.00		

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
iv	Supplying, laying, testing & commissioning of 4 C X 10 sq.mm. at 1100 volts grade PVC insulated <u>copper</u> <u>conductor</u> armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination acessories, Clamps etc. as required as per specification from main board to UPS Room	RM	35.00		
V	Supplying, laying, testing & commissioning of 4 C X 16 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination acessories, Clamps etc. as required as per specification (Light DB).	RM	10.00		
vi	Supplying, laying, testing & commissioning of 4 C X 25 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination acessories, Clamps etc. as required as per specification (Power DB,AC DB & Server Room DB).	RM	15.00		
vii	Supplying, laying, testing & commissioning of 4 C x 75 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination acessories, Clamps etc. as required as per specification (Mains).	RM	25.00		
D.	DISTRIBUTION BOARD				
	Supplying, installing, testing & commissiong of surface/recessed mountings, Double door 415 volts TPN MCB distribution board of steel steel, 1.6mm thick dust phosphatized and painted, inclusive of 100 amps, tinned copper busbars, earthbar, common neutral link, din bar for mounting of MCB's detachable gland / knock out plate & with built in loose wire boxl, and superior make terminal connectors for all incoming and outgoing circuits duly prewired with adequate size of PVC insulated copper wires between the bus bars and the MCB's as well as the incomer and upto the terminal connectors/ neutral link and ready for installation of following ways as required.				
	Use 'B' curve MCB's for lighting & small power circuits, 'C' curve for motor duty i.e. for pumps, AC motors, window and split AC's etc. & 'D' curve for UPS DB's i.e. for computers/ PC's circuit. Main incomer & outgoing circuit MCB's shall be selected accordingly i.e. type B,C & D. Contractor to select the MCB's accordingly as per the nature of the circuit/ load.				
	Each DB shall have separate neutral links of rating not less than 100A for each phase. The main incoming neutral link shall be in addition to three outgoing neutral links and shall be of 125 A.				

S.No.		UNIT	ΟΤΥ	DATE	
5.NO.	DESCRIPTION OF WORKS UPS DB's shall have a dedicated Earthing link fixed on		QTY	MAIE	AWOUNT
	insulated supports, which will be in addition to body earth				
	link.				
	All internal inter connecting wiring with in the DB's shall				
	be PVC insulated flexible copper conductor wires of				
	adequate capacity as per the current rating.				
	Inside each DB, a DB chart is to be fixed.				
а	6-way TPN DB (LIGHT DB)	No.	2.00		RATEAMOUNTII
	Incomer:-				
	1 No. 40 Amp TPN (10 KA) MCB with 40 A DP RCCB				
	(100 MA) each phase				
	Outgoing:-				
	16 Nos.6/10/25 Amp (10 KA) SP MCB				
		No	1.00		
<u>В.</u>	4-way TPN DB ( POWER DB)	No.	1.00		
	Incomer:-				
	1 No. 63 Amp TPN (10 KA) MCB with 40 A DP RCCB (100 MA) each phase				
	Outgoing:-				
	8-10 Nos.6/10/25 Amp (10 KA) SP MCB				
C.	4-way V-TPN DB (AC)	No.	1.00		
	Incomer:-				
	1 No. 80 Amp 4 Pole (16 KA) MCCB				
	Outgoing:-				
	4No. 40 Amp (16 KA) TP MCB				
	5Nos.10/16/25/32 Amp (10 KA) SP MCB				
D.	4-way TPN DB UPS ROOM	No.	1.00		
	Incomer:-				
	1 No. 40 Amp TPN (10 KA) MCB with 40 A DP RCCB				
	(100 MA) each phase				
	Outgoing:-				
	10 Nos. 6/10/16/25/32 Amp (10 KA) SP MCB, For Lights,				
	Power & spare, UPS etc				
		Nia	0.00		
E	<b>4-way SPN DB</b> with 2 No 40 A (10 KA) DP MCB (For UPS Input)	No.	2.00		
F.	12-way SPN DB (For UPS Sub DB)	No.	1.00		
	Incomer:-				
	1 No. 25 Amp DP (10 KA) MCB with 25 A DP RCCB (100				
	MA)				
	Outgoing:-				
	8-10 Nos.6/10/16/25Amp (10 KA) SP MCB				
	Owen CON DD (Fair ATM DD with lash A 1	Na	1.00		
G.	8-way SPN DB (For ATM DB with lock & key arrangement)	No.	1.00		
	Incomer:-				
	1 No. 40 Amp DP (10 KA) MCB with 25 A DP RCCB (100				
	MA)				
	Outgoing:-				
	4 Nos.6/10/16/25Amp (10 KA) SP MCB				
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S.No.		UNIT	QTY	RATE	AMOUNT
E	(LIGHT FITTINGS & ACCESSORIES) Supplying, installation with hanging support, testing and commissioning of following light fixtures with electronic Ballasts, Tubes, lamps, all fixing materials including connecting wires etc. all complete as per the directions of Engineer-in-charge (All LED Light Fixures should be covered with minimum 3 Years onsite replacement warranty).				
i	FULL GLOW 2 X 2 LED 36 W slim Smart Panel of make As specified in tender document or approved by SBI/Architect.	Nos.	27.00		
ii	Supplying, fixing, testing and commissioning of 15 W LED commercial type down lighter of make As specified in tender document or approved by SBI/Architect.	Nos.	46.00		
iii	Supplying, fixing, testing and commissioning of 15 W LED commercial type surface down lighter of make As specified in tender document or approved by	Nos.	6.00		
iv	LED 18 watt Tube Light with all accessories.make As specified in tender document or approved by bank	Nos.	30.00		
V	LED Strip for cove lighting 15 W per 5 M with driver and necessary installation fittings Led strip light (5 mtr.) make as specified in tender document or approved by	RM	25.00		
vi	Supply, installation, testing and commissioning of following fans with all fixing materials like white Polycarbonate 2 mm Hylem sheet cover, down rods, fan box as required etc. all complete as per the directions of Engineer-in-charge.				
	ceiling fan 1200mm dia	Nos.	23.00		
vii	Supply & fixing of 230 mm exhaust fan 'Ventilair DX W' with self closing louvers and plastic body with all accessories etc. complete of make As specified in tender document or approved by SBI/Architect.	Nos.	3.00		
F.	EARTHING SYSTEM				
1	Supply, Installation, Testing and Commissioning of Maintenace Free Earthing system made up of copper- bonded rod of 10 feet length, 23 mm dia. (Minimum copper bonding shall be 0.25mm) along with Rod-to- Conductor connectors, Earth enhancement material, Pit Cover and other accessories as required and as per specification and other applicable codes (include chamber for earthing, Earthing certificate to be submitted		2.00		
2	Supply, Installation, Testing and Commissioning of Maintenace Free Earthing system made up of copper- bonded rod of 10 feet length, 17.2 mm dia. (Minimum copper bonding shall be 0.25 mm) along with Rod-to- Conductor connectors, Earth enhancement material, Pit Cover and other accessories as required and as per specification and other applicable codes (include chamber for earthing, Earthing certificate to be submitted along with the bill). Providing and fixing of Copper/ GI strips in surface or in		2.00		
3					

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
	25 mm x 3 mm copper strip with proper clamps	RM	5.00		Allootti
	25 mm x 5 mm GI strip	RM	5.00		
	Providing and fixing 2 X 8 SWG dia. Cu earth wire in		22.00		
	PVC conduit on surface or in recess for loop earthing		22.00		
	along with the existing surface/ recess cable as required.				
	along with the existing surface, recess cable as required.				
G.	MAIN PANEL AND METER BOARD				
м.	Designing, fabrication, supply, installation, testing and				
	commissionings of front operated cubicle type				
	compartmentalised, front access, free standing on 75MM				
	"[" MS channel, dust and vermin proof (IP 42 degree				
	protection) panel suitable for use at 415V, 3 phase, 4-				
	wire 50Hz system suitable for fault level of required value				
	symmetrical at 415V fabricated from 2mm thick CRCA				
	MS sheets with hinged, gaskettted (Metal based				
	neoprene) locable doors having structural reinforcement				
	including 3mm thick gland plates on top and bottom,				
	lifting hooks, GI earth strip of required size with 2 nos				
	earth terminals, 2 nos 230V AC operated 250mm X				
	250mm size axial fans for exhaust of heat with On-Off				
	toggle switches including 2 coated primer and 2 power coated paint fnish of approved shade over metal surface				
	cleaned and treated with seven tank process complete				
	with interconnections etc as per specifications as				
	required.main panel board of approved make (KRYPTON				
	POWER CONTROLS/NEPTUNE/TRICOLITE/AMPTECH				
	Or should be CPRI Approved, Type of Approval as				
	instructed by the SBI/Architect)as per the following				
	specifications should be CPRI Approved. All live accessible parts shall be shrouded and all				
	equipment shall be finger touch proof. The busbars				
	insulation shall be withheat shrinkable sleeves SMC/				
	DMC shrouds and busbar supports shall be used.				
	Padlocking facility shall be provided on all outgoing				
	feeders doors and switch handles shall be locable in				
	Suitable arrangement shall be made for termination of				
	multiple incoming cables.				
	All kA values indicated shall be Ics breaking capacity				
	GA drawings shall be got approved by SBI				
	Fabrication, supply, installation, testing and				
	commissionings of cubicle type floor/wall mounted L.T.				
	panel made out of 2 mm thick CRCA sheet including				
	connection, inter-connection along with 4 strip aluminium				
	busbar as per CPWD specifications,(Part IV-Sub-station)				
	etc. as required.(Meter Board )				
	Incoming :- i) 1no. 160 Amp 4P MCCB (25 KA) thermal over current,				
	instantaneous, Short circuit realease,Earth fault.				
	ii) Busbar :-200 Amps 4P aluminum conductor bus bar				
	(BPTM type Heat-shrinkable busbar insulation)				
	supported by DMC / FRP insulators.				
	Space shall be provide for the BSES Meter				
	Meter board shall be lockable.				
	Complete panel described as above.				
b.	Floor panel shall consists of : -				
	INCOMER				

No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUN
	1no. 125 Amp 4P On Load Change over switch with 1 No. 100 Amps, TPN MCCB (25 KA) with extendeble rotary				
	handle each thermal over current, instantaneous, Short circuit realease,Earth fault.				
	BUSBARS				
	200 amps TPN pole busbar chamber of suitable length with copper busbars. All busbars and interconnections shall be of suitable size copper strips.				
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc. with 3 Nos. current transformers of 100/5A ratio, 10 VA Class-1.0 metering 1 sets				
	Red/Green/Amber ON/OFF/TRIP indicating lamps with 2A SP MCB backup protection.				
	1 set of three phase indicating lamps along with 2A SP MCB backup protection.				
	Restricted Earth fault relay with 3 Nos. current transformers of 160/5 ratio, 15 VA Class 5P 10 (Numeric Relay not required.)				
	Undervoltage, Overvoltage & phase reversal relay for persisted voltage of 105-180% & 20-95% of rated voltage. (Numeric Relay not required.)				
	OUTGOINGS:-				
	2 Nos 63A TPN MCCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. For capacitor Bank AND AC VTPN,				
	2 Nos 63A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For PDB,UPS)				
	1 Nos 40A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For LDB)				
	2 Nos 40A DP MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	The electrical panel as described above and specifications complete.	Set	1.00		
	TOTAL FOR ELECTRICAL WORKS				
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