

ANCHOR INSTITUTE OF SOLAR ENERGY								
GUJARAT POWER ENGINEERING & RESEARCH INSTITUTE								
TENDER BOQ								
SR. NO.	PARTICULAR	QTY.	A/U	Make	RATE (INR)	GST (INR)	RATE AFTER GST (INR)	AMOUNT (INR)
A- CIVIL WORKS (ESTIMATED COST- 1000000 INR)								
1	Construction of 6 m X 4 m X 3 m room with walls of brick masnory, load bearing structure with M 25 slab beams on top, internal plaster being 8 mm thick in CM (1:3), ceiling plaster being 5 mm thick in CM (1:4), external plaster being 20 mm thick in CM (1:6), kotastone flooring, flush door shutter with frame, acrylic emulsion paint on walls and white wash on ceiling, etc.	1	JOB					
2	Gypsum false-ceiling	470	SM					
3	Two coats oil bound distemper over one coat of primer over internal surface MAKE: ASIAN PAINT/BURGER	200	SM					
TOTAL AMOUNT FOR CIVIL WORKS (A)								
B- FURNITURE & FIXTURES (ESTIMATED COST- 9000000 INR)								
	Furniture							
4	Premium Suit (L- shaped Drawer with side unit set) (2200 L X 1950 D X 750 H)	1	EACH					
5	Very high back Chair	1	EACH					
6	Revolving visitors Chair	11	EACH					
7	Computer tables 2100 L X 900 D X 750 H (3 Nos cpu aregment)	1	EACH					
8	Visitors Chair	2	EACH					
9	Classic Computer tables 1600 L X 700 D X 750 H (CPU and Drawear aregement)	4	EACH					
10	Desk side cabinet 2 drawer,1 filing (390 W X 590 D X 640 H)	4	EACH					
11	Midas Lounge 3 Seater	1	EACH					
12	Midas Lounge 1 Seater	2	EACH					
13	Glass Table (110 cm L x 60 cm W x 43 cm H)	1	EACH					
14	Conference table 8 seater 3600 LX 1200 D X 750 H	1	EACH					
15	Seating Premier (High back)	8	EACH					
16	Display Storage Book case	2	EACH					
17	Display storage Glass door units	2	EACH					

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18	Desking office Tables 1600 L X 700 D X 750 H (Drawer and side unit set)	2	EACH					
19	Plastic chair cello	30	EACH					
20	Lab Tables (1000 L X 610 W X 740 H)	46	EACH					
21	Storage storwels (Storwel plain)	2	EACH					
22	Desking Training Tables	16	EACH					
23	Visitors Medium back Chair	32	EACH					
24	Desking office Tables 1600 L X 700 D X 750 H (Drawer and side unit set)	2	EACH					
25	Computer tabal work Premier High back Chair	4	EACH					
26	Reception tables	1	EACH					
27	Workstation Medium back Revolving chair	64	EACH					
28	Dias table 1650 X 750 X 750 H	3	EACH					
29	Equipment Lab Tables (Have load accpetad capacity) (1000 L X 610 W X 740 H)	65	RM					
30	Aluminium Panelling for Partition wall	270	SM					
31	Louvers curtain with curtain rods For window	60	SM					
	CCTV							
32	Supply, installation, testing and commissioning of CCTV camera along with storage LAN connection and other accessories required for working of CCTV surveillance system as specified and directed.(Make: Cannon, Hikevision, Securus)							
32.1	4 MP IP based ONVIF Dome Camera with PoE and IR, bit rate up to 16 mbps, true day/night clear vision, full HD1080p real time video- DWDR & 3D DNR & BLC, EXIR illumination up to 50 m.	10	EACH					
32.2	16 channel IP camera NVR having following specifications:	1	EACH					
	[i] General:							
	Main Processor: high performance dual core embedded microprocessor							
	Operating System: embedded LINUX							
	System Resources: pentaplex function: live, recording, playback, backup & remote access							
	Control Mode: front panel, USB mouse, IT remote control, keyboard, network							
	[ii] Video & Audio:							
	IP Camera Input: 16 channel							
	Video Output: 1 HDMI (video & audio), 1 VGA							
	Voice Intercom: 1 Channel Input, BNC, (200- 2800 mV, 30 kΩ), 1 channel output, (200- 3000 mV, 05 kΩ)							

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	[iii] Display:							
	Display Split: 1/4/8/9/16							
	Resolution: 1920 X 1080, 1280 X 1024, 1280 X 720, 1024 X 768							
	Tour Display: support							
	Privacy Masking: 4 self- defined four- sided zones for privacy masking for each camera							
	OSD: camera title, time, video loss, camera lock, motion detection, recording							
	[iv] Recording:							
	Compression: H.264/MPEG4							
	Recording & Resolution: 1080P (1920 X 1080) / 720P (1280 X 720) / D1 (704 X 576 / 704 X 480)							
	Recording Speed: up to 400/480 fps at (704 X 576 / 704 X 480), up to 200/480 fps at 720P, up to 100/240 fps at 1080P							
	Recording bit-rate: up to 32 mbps							
	Recording Quality: CBR, VBR							
	Recording Mode: manual, schedule (regular (continuous), MD (video detection, camera blank, video loss), alarm), stop							
	Recording Priority: Manual > Alarm > MD > Regular							
	Recording Interval: 1- 120 minute (default: 60 minute)							
	[v] Video Detection & Alarm:							
	Trigger Events: recording, PTZ movement, tour, alarm, email, FTP, buzzer & screen tips							
	Motion Detection: Zones: 396(22 X 18), Sensitivity: 1- 6 (level 6 is the highest)							
	Video Loss & Camera Blank: Support							
	Alarm Input: 16 channel							
	Relay Output: 6 channel							
	[vi] Playback & Stop							
	Playback Channel: 1/2/4/All							
	Search Mode: time/date, alarm, MD & exact search (accurate to second)							
	Playback Function: Play, Pause, Stop, Rewind, Fast Play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup, Digital Zoom							
	Backup Mode: flash drive/ USB HDD, USB CD & DVD / eSATA / built-in SATA burner / network DL							
	[vii] Network:							

SR. NO.	PARTICULAR	QTY.	A/U	Make	RATE (INR)	GST (INR)	RATE AFTER GST (INR)	AMOUNT (INR)
	Ethernet: 2 X RJ 45 port (10 / 100M / 1000M)							
	Network Function: HTTP, TCP/IP, UPNP, RTSP, UDP, NTP, DHCP, DNS, IP, FILTER, PPPOE, DDNS, FTP, ALARM SERVER, IP SEARCH							
	Maximum Remote Users: 20 users simultaneously							
	Remote Operation: monitor, PTZ control, playback, system setting, file download, log information							
	[viii] Hard Disk Drive							
	Hard Disk: 8 SATA ports. 8 HDDs or 6 HDDs + 1 CD/DVD RW, up to 24 TB							
	eSATA: 4 external SATA ports, up to 12 TB							
	Space Occupation: maximum 3.6 GB/hr per channel							
	HDD management: HDD group, HDD hibernation technology, HDD faulty alarm & raid (redundancy)							
	[ix] Auxiliary Interface:							
	USB interface: 3 ports for mouse control & backup							
	RS232: keyboard, PC communication							
	RS485: PTZ control							
32.3	Monitoring screen for 16 channels (minimum 40" LED)	1	EACH					
	NETWORKING							
33	Supply, installation, testing and commissioning of local area networking (LAN) as specified and directed. (Make: Cisco, D-Link, Molex, HP, Elixir)							
33.1	Managed layer 3 switch with 48 ports of 10/100/1000 mbps with 4 additional 1 gbps SFP uplinks and future upgradable to SFP+ and stacking features	1	Each					
33.2	12U wall-mounted rack with accessories (cable manager- 02 Nos., PDU- 05 Nos., 6 A socket- 01 Nos., mounting hardware), 2 fans top- mounted	1	Each					
33.3	48 port CAT 6 patch panel	1	Each					
33.4	CAT 6 STP 1 m patch cord	48	Each					
33.5	CAT 6 STP cable	2500	RM					
33.6	Modular type 2 module RJ 45 socket	31	Each					
33.7	CAT 6 STP 2 m patch cord	31	Each					
	PROJECTOR							

SR. NO.	PARTICULAR	QTY.	A/U	Make	RATE (INR)	GST (INR)	RATE AFTER GST (INR)	AMOUNT (INR)
34	Supply, installation, testing and commissioning of LCD projector with wireless & wired network functions and 16: 10 projector screen of size 90 type (inch), 2.3 m as specified and directed. [Make: Hitachi, Sony, EPSON]	4	Job					
	[i] Liquid Crystal Panel: 0.63 type (inch), 1.6 cm polysilicon active-matrix TFT X 3							
	[ii] No. of Pixels: 786432 pixels (H1024 X V768)							
	[iii] Resolution: 1024 X 768 colour pixels (XGA)							
	[iv] Manual Zoom: x1.2							
	[v] Lamp: 210 W UHP							
	[vi] Light output (Brightness): 4000 lumens							
	[vii] Contrast Ratio: 3000: 1 (presentation mode)							
	[viii] Audio: 16 W (mono 8 W X 2)							
	[ix] Keystone Correction: Auto Vertical Keystone							
	[x] Power Supply: AC 100-120 V/ AC 220- 240 V							
	[xi] Operating Temperature: 5°- 35° C							
	[xii] Input Signals: (a) Computer Input: VGA, SVGA, XGA, WXGA, WXGA+, SXGA, SXGA+, UXGA, MAC16" (b) Video Input: NTSC, NTSC4.43, PAL, PAL-M, PAL- N, PAL (60 Hz), 480i@60, 480p@60, 576i@50, 576i@50, 576p@50, 720p@50/60, 1080i@50/60, 1080p@50/60							
	[xiii] Input/Output Terminals:							
	[a] Video Input: S-Video: Mini Dip 4- pin X 1, Composite Video: RCA jack X 1, Component Video: RCA jack X 3							
	[b] Audio Input: Stereo Mini jack X 2, RCA jack X 2 (L/R)							
	[c] Computer Input: Analog RGB: 15- pn Mini-Dsub X 2							
	[d] HDMI Input: HDMI X 1 (HDCP compliant)							
	[e] Audio Output: RCA jack X 2 (L/R)							
	[f] Monitor Output: Analog RGB: 15-pin Mini-Dsub X 1							
	[g] USB: USB type A X 1 (for PC-less presentation or wireless adapter), USB type B X 1 (for USB display or USB mouse control)							
	[h] Control: 9-pin Dsub X 1 for RS232C							
	[i] Wireless Network: Option (Yes)							
	[j] Wired Network (LAN): RJ-45 X 1							
	[k] Mic Input: Mono Mini jack X 1 (compatible with dynamic microphones and unbalanced signal lines)							
	[ixv] Dimensions (W X H X D): 317 mm X 98 mm X 288 mm (approx)							

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	[xv] Standard Accessories: Remote control with two AA batteries, Power cord , Computer cable, Adapter cover, Lens cover, User's manuals, Security label, Application CD							
	[xvi] Additional Accessories: Lamp: DT01021, Filter set: MU06481, Laser remote control: HL02651 (RC-R008), USB wireless adapter: USB-WL-11N							
	UPS							
35	Supply, installation, testing and commissioning of 20 kVA 3-Ph input & 3-Ph output DSP based double conversion online UPS with true galvanic isolation with required SMF batteries with racking and interconnecting link of following specifications as specified and directed. [Make: Sukam , V-gaurd, luminous equivalent]	1	Job					
	[i] Input:							
	No. of Phases: 3- Ph, 4- Wire							
	Voltage Range: 310 V- 480 V AC							
	Frequency Range: 47 Hz- 53 Hz							
	[ii] Output:							
	Power: 16 kW							
	Load PF range: 0.8 lagging							
	No. of Phases: 3- Ph, 4- Wire							
	Output Waveform: Pure Sine Wave							
	Voltage Range: 415 V \pm 2% (P-P)							
	Frequency Range: 50 Hz \pm 0.1 Hz							
	Load Crest Factor: > 3:1							
	Output Voltage THD: \leq 3% on linear load							
	Loading Capacity: 110% for 8 minutes / 125% for 1 minute / 150% for 13 s							
	[iii] Bypass:							
	Capacity: 125% continuous							
	Maintenance Bypass: Available							
	[iv] Batteries:							
	No. of 12 V batteries: 30							
	Voltage: 360 V DC							
	Battery Charging Current: 10 A							
	Battery Recommendation: 42 Ah							
	Battery Self Test: Automatic & Manual							
	[v] User Interface:							
	Communication Port: RS-232 server & client							

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	Operating System: Windows 95/98/NT/2000/XP							
	[vi] General:							
	Indication: LCD panel							
	Alarm: Mains Failure, Battery Low, Overload, Short Circuit							
	Protection: Short Circuit, Over Voltage & Under Voltage Protection							
	Cooling: Forced Air Cooling							
	UPS Efficiency: > 90%							
	Operating Temperature: 0° C to 45° C							
	Operating Humidity: 95% condensing							
	Acoustic Noise: < 45 dB at 1 m							
	Protection Class: IP 20							
	AIR CONDITIONING SYSTEM							
36	Supply, installation, testing and commissioning of five-star rated Hi-wall type units indoor/outdoor complete with cordless remote control unit and with built-in heating and cooling arrangement and digital Inverter twin rotary compressor, single phase units 220V - 240V, 50 Hz of capacity as shown.(Make: Blue Star, Carrier, Daikin, Hitachi, Voltas)							
36.1	1.5 TR	5.00	Each					
36.2	2.0 TR	8.00	Each					
37	Supply, installation, testing and commissioning of copper refrigerant piping in hard drawn copper pipes,complete with GI slotted channel supports with GI clamps, anchor fasteners, threaded rods etc. with nitrile rubber insulation of appropriate thickness.	150.00	RM					
38	Supply, installation, testing and commissioning of PVC drain piping of suitable size complete with proper fitting (elbows, bends, tee etc.) properly installed using GI slotted channel / GI split clamp supports with UPVC drain piping insulation of appropriate thickness.	150.00	RM					
39	M & L for 2 mm thick hot-dip galvanized & powder coated perforated cable tray, conforming to IEC 6537, including accessories, supports and other sundry items of following sizes							
39.1	50 mm (W) X 25 mm (H)	20.00	RM					
39.2	200 mm (W) X 50 mm (H)	50.00	RM					
39.3	450 mm (W) X 50 mm (H)	20.00	RM					
TOTAL AMOUNT FOR FURNITURE & FIXTURES WORKS (B)								
C- ELECTRIC WORKS (ESTIMATED COST- 2000000 INR)								

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40	M & L for point wiring using ISI marked 1.1 kV grade single core FR-LSH flexible cable, conforming to IS: 694- 1990, having multi-drawn thin strands of electrolytic copper conductors, conforming to IS: 8130- 1984 and insulation conforming to IS: 5831- 1984, for phase, neutral and earth continuity conductor connecting to earth dolly, drawn in not less than 25 mm NB UPVC medium grade surface/recessed conduits, conforming to IS: 9537 (Part 3)- 1983, colour-coded as specified in IS: 11353- 1985, including factory made sunken, galvanized, not less than 1.00 mm thick modular flush sheet metal enclosure having top, bottom, side and back-wall knockout for conduit entry from any direction, conforming to IS: 14772- 2000 and suitable for modular cover-plates complete all as specified in IS: 732- 2019. (Make: RR Kabel, Havells, Polycab)							
40.1	One light point or one fan point controlled by one switch with cables 1.5 sq mm size (Make:- RR Kable, POLYCAB, HAVELLS)	109	Each					
40.2	One 6 A socket outlet, independent, with cables 1.5 sq mm size (Make:- RR Kable, POLYCAB, HAVELLS)	91	Each					
40.3	One 16 A socket outlet, independent, with cables 2.5 sq mm size (Make:- RR Kable, POLYCAB, HAVELLS)	55	Each					
40.4	One 20 A single pole and neutral enclosure with a two pin and earth plug and socket, independent, with cables 4.0 mm ² size (Make:- RR Kable, POLYCAB, HAVELLS)	14	Each					
41	S & F modular type 6 A one-way SP switch, conforming to IS: 3854- 1997 with finger proof terminal (Make: Legrand, Schneider, Havells)	200	Each					
42	S & F modular type 2/3 pin combined 6 A socket conforming to IS: 1293-1988 (Make: Legrand, Schneider, Havells)	91	Each					
43	S & F modular type 16 A one-way SP switch, conforming to IS: 3854- 1997 with finger proof terminal(Make: Legrand, Schneider, Havells)	55	Each					
44	S & F modular type 5 pin combined 6/16 A socket conforming to IS: 1293-1988 (Make: Legrand, Schneider, Havells)	55	Each					
45	S & F single pole and neutral enclosure with a two pin and earth plug and socket suitable for surface/flush mounting, conforming to IEC 61439-3, complete with one 20 A, 230 V, 50 Hz SP MCB as specified and directed. (Make: Legrand, Schneider, Havells)	14	Each					
46	S & F 415 V, 32 A, 3P + N + E combined unit with interlocked switched sockets and surface mounting box IP 66 with DIN rail. (Make: Legrand, Schneider, Havells)	19	Each					

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47	S & F modular type hum-free step fan regular, conforming to IS: 11037-1984 (Make: Legrand, Schneider, Havells)	35	Each					
48	M & L for ceiling rose, 3-Ph/ PVC / polycarbonate, isolated body (Make: Anchor, Precision, Nihir)	109	Each					
49	S & F factory made sunken, galvanized, not less than 2.00 mm thick modular flush sheet metal enclosure having top, bottom, side and back wall knockout for conduit entry from any direction, conforming to IS: 14772- 2000 all as specified and directed. (Make: Legrand, Schneider, Havells)							
49.1	1 module [Make: Legrand 6890 07 or equivalent]	6	Each					
49.2	3 module [Make: Legrand 6890 08 or equivalent]	80	Each					
49.3	4 module [Make: Legrand 6890 09 or equivalent]	3	Each					
49.4	6 module [Make: Legrand 6890 10 or equivalent]	1	Each					
49.5	8 module [Make: Legrand 6890 31 or equivalent]	33	Each					
49.6	12 module [Make: Legrand 6890 11 or equivalent]	2	Each					
49.7	18 module [Make: Legrand 6890 12 or equivalent]	6	Each					
50	S & F factory made screwless, dust proof cover plates having superior finish, rounded corners, and solid strength supported by plastic frame behind with flexible wall alignment, horizontal adjustment facility all as specified and directed.(Make: Legrand, Schneider, Havells)							
50.1	1 module [Make: Legrand 6732 11 or equivalent]	6	Each					
50.2	3 module [Make: Legrand 6732 13 or equivalent]	80	Each					
50.3	4 module [Make: Legrand 6732 14 or equivalent]	3	Each					
50.4	6 module [Make: Legrand 6732 66 or equivalent]	1	Each					
50.5	8 module [Make: Legrand 6732 68 or equivalent]	33	Each					
50.6	12 module [Make: Legrand 6732 62 or equivalent]	2	Each					
50.7	18 module [Make: Legrand 6732 58 or equivalent]	6	Each					
51	S & F 42 W recessed mounted or suspended 4' X 1' LED Panel having extruded aluminium housing with PC diffuser and integrated electronic driver with high efficiency long life LED chips with a beam angle of 120° to ensure better lumen output, CRI ≥ 80, power factor ≥ 0.95, CCT 6500K, system luminous efficacy ≥ 80, 3 kV surge protection, operating voltage 220- 240 V, operating temperature 10° C to 45° C including electrical connection with 3 core flexible Cu conductor cable of appropriate size from ceiling rose to the fixture all as specified and directed. [Make: Jaquar LSVR03S042XC,Havells, Philips , Wipro or equivalent]	20	Each					

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52	S & F 20 W recessed mounted 1' X 1' LED Panel having extruded aluminium housing with PC diffuser and integrated electronic driver with high efficiency long life LED chips with a beam angle of 120° to ensure better lumen output, CRI ≥ 80, power factor ≥ 0.95, CCT 6000K, system luminous efficacy ≥ 75, 2.5 kV surge protection, operating voltage 220- 240 V, operating temperature -10° C to 45° C including electrical connection with 3 core flexible Cu conductor cable of appropriate size from ceiling rose to the fixture all as specified and directed. [Make: Jaquar LSVR01S020XC, Havells, Philips, Wipro equivalent]	34	Each					
53	S & F 90 W suspended triangle shaped pendent LED light having extruded aluminium housing with PC diffuser and integrated electronic driver with high efficiency long life LED chips with a beam angle of 120° to ensure better lumen output, CRI ≥ 80, power factor ≥ 0.95, CCT 6000K, system luminous efficacy ≥ 90, 2.5 kV surge protection, operating voltage 220- 240 V, operating temperature -10° C to 45° C including electrical connection with 3 core flexible Cu conductor cable of appropriate size from ceiling rose to the fixture all as specified and directed. [Make: Jaquar LTRS02T090XC Havells, Philips , Wipro or equivalent]]	1	Each					
54	S & F 9 W recessed mounted LED light having die cast aluminium housing with PC diffuser and integrated electronic driver with high efficiency long life LED chips with a beam angle of 120° to ensure better lumen output, CRI ≥ 80, power factor ≥ 0.9, CCT 6500K, system luminous efficacy ≥ 75, 2.5 kV surge protection, operating voltage 220- 240 V, operating temperature -10° C to 45° C including electrical connection with 3 core flexible Cu conductor cable of appropriate size from ceiling rose to the fixture all as specified and directed. [Make: Jaquar LARV01R009XC, Havells, Philips , Wipro or equivalent]	3	Each					

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55	S & F 15 W recessed mounted COB based LED multiple zoom light with anodized reflector and tempered transparent glass diffuser and integrated electronic driver, die cast aluminium housing with CRCA frame, high efficiency long life LED chips with a beam angle of 120° to ensure better lumen output, CRI ≥ 80, power factor ≥ 0.9, CCT 6500K, system luminous efficacy ≥ 75, 2.5 kV surge protection, operating voltage 220- 240 V, operating temperature -10° C to 45° C including electrical connection with 3 core flexible Cu conductor cable of appropriate size from ceiling rose to the fixture all as specified and directed. [Make: Jaquar LZOMMLR115XC, Havells, Philips , Wipro or equivalent]	16	Each					
56	S & F energy efficient high-speed ceiling fan, having 1200 mm blade sweep, speed not less than 350 RPM, air-flow not less than 230 CMM, operating voltage 220-240 V and frequency 50 Hz, including a download of suitable size and electrical connection with 3 core flexible Cu conductor cable of appropriate size from ceiling rose to the fan. [Make: Havells ES 40 Havells, Philips , Wipro or equivalent]	35	Each					
57	Supply, installation, commissioning and testing of L+P DB of suitable size, factory made, CPRI type tested, indoor, cubical compartmental type, double door, both side openable with hinged doors & locking arrangement, made out of 2.00 mm thick mild steel CRCA sheet, supported and fixed on structural frame of angle iron of suitable size, including earthing stud, labeling, painting to all internal & external exposed steel surfaces with powder coating paint (7 tank process), duly mounted on wall with danger notice plate of 1.6 mm thick mild steel sheet, vitreous enameled (white) with letters figures and conventional skull and bones in signal red colour, suitable for 3- Phase 4 Wire system, 500 V grade with necessary wiring, PVC sheathed stranded copper conductor of appropriate length size, including fixing lugs bolts, screws etc. complete all as specified and directed.	1	Each					
	The panel shall comprise of the following accessories:							
	Busbar Chamber:							
	[i] Copper busbar of rated capacity 250 A, covered with PVC insulated sleeves including insulator, nuts, bolts, etc. with complete connection- 01 Set (3P + N)							
	Incoming:							

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	[i] 125 A, 415 V, Ics = Icu = 25 kA, 50 Hz MCCB with fixed magnetic settings and adjustable thermal setting (0.7 - 1 X In) TMD trip unit- 01 Nos.							
	[ii] LED phase indicators (Yellow, Blue, Red)- 01 Set							
	[iii] Digital voltmeter 0-500 V with selector switch flush mounting square type- 01 Nos.							
	[iv] Digital ammeter 0- 125 A with selector switch flush mounting square type with suitable CTs - 01 Nos.							
	[v] Energy meter conforming to IEC 61557- 12 of accuracy class C10.2S, having 2 ethernet + 1 RS485 port, 4th CT for neutral and ground current measurement, time stamping D/T for current and powers battery backed up real time clock							
	Outgoing:							
	[i] 63 A, 415 V, 10 kA, 50 Hz FP MCB (C-curve) - 05 Nos.							
	[ii] 32 A, 230 V, 10 kA, 50 Hz SPN MCB (C-curve) - 03 Nos.							
58	Supply, installation, commissioning and testing of PDB of suitable size, factory made, CPRI type tested, indoor, cubical compartmental type, double door, both side openable with hinged doors & locking arrangement, made out of 2.00 mm thick mild steel CRCA sheet, supported and fixed on structural frame of angle iron of suitable size, including earthing stud, labeling, painting to all internal & external exposed steel surfaces with powder coating paint (7 tank process), duly mounted on wall with danger notice plate of 1.6 mm thick mild steel sheet, vitreous enameled (white) with letters figures and conventional skull and bones in signal red colour, suitable for 3- Phase 4 Wire system, 500 V grade with necessary wiring, PVC sheathed stranded copper conductor of appropriate length size, including fixing lugs bolts, screws etc. complete all as specified and directed.	3	Each					
	The panel shall comprise of the following accessories:							
	Busbar Chamber:							
	[i] Copper busbar of rated capacity 100 A, covered with PVC insulated sleeves including insulator, nuts, bolts, etc. with complete connection- 01 Set (3P + N)							
	Incoming:							
	[i] 63 A, 415 V, Ics = Icu = 16 kA, 50 Hz MCCB with fixed magnetic settings and adjustable thermal setting (0.7 - 1 X In) TMD trip unit- 01 Nos.							

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	[ii] LED phase indicators (Yellow, Blue, Red)- 01 Set							
	[iii] Digital voltmeter 0-500 V with selector switch flush mounting square type- 01 Nos.							
	[iv] Digital ammeter 0- 63 A with selector switch flush mounting square type with suitable CTs - 01 Nos.							
	[v] Energy meter conforming to IEC 61557- 12 of accuracy class Cl0.2S, having 2 ethernet + 1 RS485 port, 4th CT for neutral and ground current measurement, time stamping D/T for current and powers battery backed up real time clock							
	Outgoing:							
	[j] 32 A, 415 V, 10 kA, 50 Hz FP MCB (C-curve) - 07 Nos.							
59	S & F 4 Pole changeover switch in SS enclosure for 63 A, 415 V, 50 Hz AC complete as specified and directed.	1	Each					
60	S & F vertical triple pole & neutral DB suitable for flush mounting & surface mounting with 250 A insulated & shrouded copper busbar for each phase, 2 fully insulated & shrouded neutral bar, 2 earth bar, wire set and cable ties for cable management, IP 54 & IK 09 protection with reversible metal door with provision for FP MCB/Isolator/RCCB/RCBO as incomer and SP/TP MCBs as outgoing. (Make: LEGRAND or Equivalent)							
60.1	VTPN DB, 4-way	1	Each					
60.2	VTPN DB, 8-way	1	Each					
61	S & F single pole & neutral DB suitable for flush mounting & surface mounting with 100 A insulated & shrouded copper busbar, fully insulated & shrouded neutral bar, earth bar, wire set and cable ties for cable management, IP 54 & IK 09 protection with reversible metal door with provision for DP MCB/Isolator/RCCB/RCBO as incomer and SP MCBs as outgoing. (Make: LEGRAND or Equivalent)							
61.1	SPN DB, 8-way	3	Each					

SR. NO.	PARTICULAR	QTY.	A/U	Make	RATE (INR)	GST (INR)	RATE AFTER GST (INR)	AMOUNT (INR)
62	S & F ISI marked MCB for AC applications till 63 A, having breaking capacity Icn = 10 kA, conforming to IS/IEC 60898-1-2002, sliding bottom clamp, colour coded on/off indication on dolly, biconnect IP 20 protected lower terminals and sliding shutters							
62.1	6- 32 A, SP MCB C- curve [Make: Legrand or equivalent]	52	Each					
62.2	6- 32 A, SPN MCB C- curve [Make: Legrand or equivalent]	3	Each					
62.3	40- 63 A, FP MCB C- curve [Make: Legrand or equivalent]	2	Each					
63	M & L for submain wiring using IS: 694- 1990 marked 1.1 kV grade single core HR-FR flexible cable having multi-drawn thin strands of electrolytic copper conductors and insulation for phase & neutral and earth continuity conductor connecting to earth dolly, drawn in medium grade non-metallic PVC conduit not less than 25 mm dia., colour-coded and making good of disturbed surfaces of wall/ceiling/floor complete all as specified and directed. [NOTE: Phase & neutral conductor, earth continuity conductor and concealed conduit shall be measured as one length.] (RR Kabel, Polycab, Havells or Equivalent)							
63.1	2 X 4 SQ MM + 1 X 4 SQ MM	200	RM					
63.2	2 X 6 SQ MM + 1 X 6 SQ MM	100	RM					
63.3	3 X 6 SQ MM + 2 X 6 SQ MM	350	RM					
63.4	3 X 10 SQ MM + 2 X 10 SQ MM	120	RM					
63.5	3 X 16 SQ MM + 2 X 16 SQ MM	50	RM					
64	M & L for IS 694 marked, stranded aluminium conductor (as per IS: 8130), XLPE insulated, extruded PVC type ST-2 (as per IS: 5831) sheathed, single layer of galvanized steel flat strip armoured cable of 1.1 kV grade, conforming to IS: 7098 (Part-2), including cable termination and cable glanding of following size all as specified and directed. (Make : RR Kabel, Polycab, Havells or Equivalent)							
64.1	3.5 core, 70 SQ MM	100	RM					
64.2	3.5 core, 50 SQ MM	50	RM					
64.3	3.5 core, 35 SQ MM	50	RM					
TOTAL AMOUNT FOR ELECTRIC WORKS (C)								
TOTAL AMOUNTFOR CIVIL, ELECTRIC, FURNITURE & FIXTURES WORKS (A + B + C)								

ANCHOR INSTITUTE OF SOLAR ENERGY**GUJARAT POWER ENGINEERING & RESEARCH INSTITUTE****TENDER BOQ SUMMARY**

Sr No	Particular	Total Amount (Inclusive of All taxes & Other Charges)
1	TOTAL AMOUNT FOR CIVIL WORKS (A):-	
2	TOTAL AMOUNT FOR FURNITURE & FIXTURES (B):-	
3	TOTAL AMOUNT FOR ELECTRIC WORKS (C):-	
	TOTAL AMOUNT FOR CIVIL, FURNITURE & FIXTURES, AND ELECTRICAL WORKS (A+B+C)	