

Tender Inviting Authority: JOINT MANAGER [ELECTRICAL DIVISION] ,  
**THE ODISHA STATE POLICE HOUSING & WELFARE CORPORATION LTD.**  
 (A Government of Odisha Undertaking)

Name of work :-SUPPLY,INSTALLATION,TESTING & COMMISSIONING OF STAGE LIGHTING, DRAPERY & CYCLORAMA,STAGE CRAFT ,VRV AC SYSTEM ,IEL, FANS & FITTINGS AT AUDITORIUM OF SHRI JAGANNATH SANSKRIT VISHVAIDYALAYA, SHRI VIHAR, PURI.

Contract No: BID REF NO.- 25 /JM/ ELECT/OPHWC/2020-21

Bidder Name

SCHEDULE OF WORKS

Sl. No.	Description of work	Qty.	Unit	Estimated Rate	AMOUNT Rs.
<b>A.</b>	<b>STAGE &amp; HALL LIGHTING</b>				
<b>1</b>	Supply, installation , testing & commissioning of CE Certified 150W LED Follow Spot Light with Manual operation and Hi grade plastic / metal body black color with following specifications - • Base Color : Cool White 6500K/7500K • Beam Angle: 20° • 4 Nos Color wheel • Adjustable aperture/Irish • Power Consumption : 150W ± 15% • Light Out put : Can be able to project upto 30 Mtrs • User Interface : 4 or more Nos Membrane type switch Or Faders • Including 3 Section Light Weight Stand. Make Modern Stage Services or Canara lights	4	Each Set.	65,000.00	<b>260,000.00</b>
<b>2</b>	Supply, installation , testing & commissioning of 200/240W LED COB PAR light with DMX512 & Manual operation and Hi grade plastic / metal body black color with following specifications - • Beam Angle : 50° or 60° with PMMA Lens • Power Consumption : 200W ± 15% • CRI, TLCI : > 90 • Light Out put : 3,000 Lux at 2 Mtrs • User Interface : 4 Nos High Precision Tactile type selector switch with Seven Segment Display • Dimming : 0 to 100% 8 Bit Linear Dimming • DMX data IN / OUT: 5 pin locking XLR • Cooling system with low noise fan for forced ventilation • 2.5 m Power In + 0.5 m Power out 3 core 1 mm <sup>2</sup> FRLS & ISI mark cable with 3pin IEC Male Plug • 3 mtr DMX loop cable with cable mount 5 pin locking XLR • Accessories including, 4 Leaf Barndoor, C Clamp and Safety Bond Similar to model type SL-35. Make Modern Stage Services or Canara lights.	8	Each Set.	27,400.00	<b>219,200.00</b>

3	<p>Supply, installation , testing &amp; commissioning of of 1000W CE Certified halogen Fresnel spot light providing illumination of 28000 lux at 2 mt in spot at 10° beam angle while 4600 lux at 2 mt when operated in flood at 48° beam angle , dimension as 290 x 405 x 290mm, 150mm aid German lens, weight of 4.6Kg, Gx9.5 base lamp socket, power cord with 16amps 3 pin CE plug and normal yoke but without lamp and accessories. Lamp - 1000W 230V single ended lamp Power supply - 230-240V AC, Lamp Socket - Gx9.5,Housing - Light weight, rugged and reliable both indoor and outdoor, Robust per-treated fabricated housing with die cast component and epoxy polyester,Distribution - Delivers smooth uniform field across the entire spread from spot to flood focusing,Switching options - Local control and Digital DMX control through Dimmer, Dimming option - Digital DMX control through Dimmer,Reflector - Spherical high reflective aluminum anodized,Yoke - Fabricated using MS flat-accepts mounting on 16mm spud,Focus - controlled by front &amp; rear thermoplastic knob.. Similar to model type Sapphire- 1000. Make Modern Stage Services or Canara lights.</p>	6	Each Set.	19,600.00	<b>117,600.00</b>
4	<p>Supply, installation , testing &amp; commissioning of of 1000W Halogen Theater Spot light with 150mm diameter plano convex lens and technical specifications as below. • Lamp - 1000W 230V single ended lamp, Lamp Socket - Gx9.5 • Power supply - 230/240V AC • Power cable - 3 core 1.5 sq. mm. copper PVC insulated • Beam angle - 40° • Housing - MS fabricated construction with black epoxy polyester powder coated. • Reflector - Aluminium reflector, sand blast anodised finished. • Protection rating - IP20, • Lens - 6" diameter.. Similar to model type Modern - 220. Make Modern Stage Services or Canara lights.</p>	1	Each Set.	18,500.00	<b>18,500.00</b>
5	<p>Supply, installation , testing &amp; commissioning of of 19°, 600/750W stage profile spot light powder coated diecast body with below specification  • Lamp 750W HPL • Beam spread 19° • Dimension of 560 x 340 x 430mm • 6432 lux at 5mtr • Weighing 6.2Kg, • Dichroic reflector, • G9.5 lamp base • 4 Beam shaping shutters • Normal yoke with adjustable keys for tilt rotation  • Fine adjustment in lamp focus position for adjustment..  Make Modern Stage Services or Canara lights.</p>	2	Each Set.	12,900.00	<b>25,800.00</b>
6	<p>Supply, installation , testing &amp; commissioning of of 1000W spun aluminum PARCAN Narrow Beam made out of spun aluminum 16 SWG in 2 piece cylindrical construction with punched slot on Par can housing for natural ventilation and floating ceramic GX16d base lamp socket,Yoke made of MS flat 25 X 3mm with 13mm free mounting hole to fit the adapter, spigot with 28mm and filter frame but without lamp. "Lamp: 1000W 240V PAR-64, Lamp Socket: Ceramic type GX 16D, Housing: Aluminum sheet cylindrical construction with black epoxy polyester "Switching options: Local control and Digital DMX control through Dimmer,Dimming option: Digital DMX control through Dimmer,Yoke: Fabricated using MS flat-accepts mounting on 28mm spud Focus: Sealed beam angle,Accessories: Filter frame. Similar to model type Modern - 64. Make Modern Stage Services or Canara lights.</p>	6	Each Set.	9,500.00	<b>57,000.00</b>

7	Supply, installation , testing & commissioning of of 1000W spun aluminum PARCAN Wide Beam made out of spun aluminum 16 SWG in 2 piece cylindrical construction with punched slot on Par can housing for natural ventilation and floating ceramic GX16d base lamp socket,Yoke made of MS flat 25 X 3mm with 13mm free mounting hole to fit the adapter, spigot with 28mm and filter frame but without lamp. "Lamp: 1000W 240V PAR-64,Lamp Socket: Ceramic type GX 16D,Housing: Aluminum sheet cylindrical construction with black epoxy polyester "Switching options: Local control and Digital DMX control through Dimmer,Dimming option: Digital DMX control through Dimmer,Yoke: Fabricated using MS flat-accepts mounting on 28mm spud Focus: Sealed beam angle,Accessories: Filter frame. Similar to model type Modern - 64. Make Modern Stage Services or Canara lights.	4	Each Set.	9,500.00	<b>38,000.00</b>
8	Supply, installation , testing & commissioning of of 500W cyclorama light fittings with normal yoke undergone through 7 Tank chemical treatment to keep them rust free and,black matt texture finish and technical specifications as below. • Lamp - 500W tungsten halogen with R7S base • Lamp Socket - Base R7s, berass tubular holder chromium plated • Power supply - 230/240V AC • Protection rating - IP20 • Reflector - Aluminium reflector, sand blast anodised finish. Similar to model type HF - 500. Make Modern Stage Services or Canara lights.	4	Each Set.	13,500.00	<b>54,000.00</b>
9	Supply, installation , testing & commissioning of MOVING HEAD LIGHT. moving head 5R beam light used as a special effect light provided with high precision gobos and colors for entertainment lighting etc. with below specification: • Lamp : Philips MSD Platinum 5R, • Power supply : 100-240 AC, 50/60 Hz • Power cable : 3 core 1 sq. mm. copper PVC insulated • Color Temperature : 8000K • Control : DMX512, Master/Slave, • DMX Channels : 15/16/19/20 Channel • Accuracy : 16 bit precision scan • Pan/Tilt Angle : 540°/ 250° (16 bit) • Color Wheel : 14 fixed colors + rainbow effect • Gobo Wheel : 17 fixed gobos + open + macro • Prism : 8 facet prism, rotation in both directions. • Dimming : 0-100% through manual and DMX • Display : LED Display • Beam Angle : 1°/3.8° • Protection rating : IP20 • Dimension : W 394 x L 325 x H 500 mm • Weight : 18 Kg . With one number pilot unit model Pilot-2000of SGM make for two numbers moving head light.	1	Each Set.	54,000.00	<b>54,000.00</b>
10	Supply, installation , testing & commissioning of GI pipe ladder 38 mm dia medium gauge size 5'x 2' with moving arrangement with matt black color paint finish.	2	Each Set.	20,000.00	<b>40,000.00</b>
11	Supply, installation , testing & commissioning of Sub patch panel made of MS enclosure with matt grey color finish, consisting of 26 Nos. 15 Amp. Plug and Socket.	1	Each Set.	34,000.00	<b>34,000.00</b>
12	Supply, installation , testing & commissioning of Stage dip box made of MS with hinge cover duly matt color paint finish.	2	Each Set.	9,600.00	<b>19,200.00</b>

<b>13</b>	Supply, installation , testing & commissioning of floor mounted type 24ch x 4 KW duel DMXof each channel electronic dimmer to be distributed in 3 phase with suitable bus bar arrangement housed in sheet metal enclosure with local control panel and DMX 512 facility and MCB protection of each channel. Similar to type XL 20/24 Make Modern Stage Services or Canara lights.	1	Each No.	272,000.00	<b>272,000.00</b>
<b>14</b>	Supply, installation , testing & commissioning of floor/ wall mounted type 18 channel 4 way patch panel. Each light circuit has MCB of rated capacity in series. Similar to type PP77D. Make Modern Stage Services or Canara lights.	1	Each Set.	60,000.00	<b>60,000.00</b>
<b>15</b>	Supplying and laying of single core 6.0 sqm. Cu 5 Nos. each of length of 4 M wire from patch panel to Dimmer rack. Through PVC pipe/ casing of Havels/ Finolex make.	30	Each Mtr.	220.00	<b>6,600.00</b>
<b>16</b>	Supply and fixing of GI perforated type cable tray with cover of 12" width from sub patch panel to control room main patch panel.	30	Each Mtr.	1,800.00	<b>54,000.00</b>
<b>17</b>	Supply, installation , testing & commissioning of recessed mounting CDMT Special Low Glare down lighter suitable for use with metal Halide lamp of 150 watt .	30	Each No.	4,900.00	<b>147,000.00</b>
<b>18</b>	Supply,Installation, Testing & commissioning of 2 x 26 watt down lighter fitting having bright anodised aluminium reflector with cross louvers & toughened glass cover, excel digital balast, 2 nos of 18 watt CFL lamp etc of approved make complete with all	38	Each No.	2,400.00	<b>91,200.00</b>
<b>19</b>	MS Box with glow sign EXIT top cover, brass holder and lamp with power on switch and power supply unit and battery backup with charger.	6	Each No.	2,000.00	<b>12,000.00</b>
<b>20</b>	Foot / chair light fittings made of MS. box sleek concealed type front louver opening for down ward light with brass holder and 15 watts lamp.	30	Each No.	800.00	<b>24,000.00</b>
<b>21</b>	Supply, Installation, Testing & commissioning of recessed mounting 4 X 14w recessed mounting low glare luminair fitting with P5 paralite louver & decorative perforations of approved make with 3 nos of 36 watt CFL lamp etc of approved make complete	12	Each No.	5,300.00	<b>63,600.00</b>
<b>22</b>	Supply, installation , testing & commissioning of Wall mounted type decorative emergency light of 2 No. lamp complete with automatic charging facility required during load shedding (hall, stage area & green room) etc.	10	Each No.	2,200.00	<b>22,000.00</b>
<b>23</b>	Supply, installation , testing & commissioning of Tube light fittings with tube light similar to model TMG2004/136 (T8), make Philips/ Wipro/ Crompton	20	Each No.	650.00	<b>13,000.00</b>
<b>24</b>	Supplying and laying of 3 core 1.5 sqm. Cu wire from light points to sub patch panel and sub patch panel to main patch panel of Havels/ Finolex make.	50	mtr	350.00	<b>17,500.00</b>

25	Supply, installation , testing & commissioning of floor / wall mounted main pannel board made out of 16 swg. c.r sheet duly powder coated having following arrangements.[duly wired with socketing] all main switches – (simens / l&t / hpl / abb ) .[make-(a)make-(a)mcb/mcb box - legrand/ schneider/havells crabtree/ abb, ( b)volt meter, ammeter-ae/imp, (d) all other accessories isi mark] size of copper bus bar - as per rating of incoming main switch with copper nut bolt neutral link – as per main switch current rating voltmeter & ammeter – ae / cappa indicator – led selector switch – salzar / surdhi bus bar insulator – resin cast drum insulator bus bar chamber must be covered with 3 mm thick bakelite cover[national / royalam] in coming - 100 amp. TPMCCB - 1 no out going-100 amp .electrolyte cupper bus bar-4 nos arrangement of 15 compartments for 13 nos 1- ph energy meter <(>&<)> 2 Nos 3 ph energy meter alongwith 13 nos 63 amp DPMCB <(>&<)> 2 Nos 63 Amp 4P MCB with locking arrangement individually. instruments volt meter -0-500 v - 1 set-ammeter with ct -0-100a - 1 set indicator with toggle switch (RYB)-3 nos	1	Set	149,677.56	149,677.56
26	Supply, installation , testing & commissioning of Facet light model MWF 330-SK/400 complete with gear box and lamp of Philips make.	4	Each No.	11,000.00	44,000.00
	<b>SOUND SYSTEM</b>				0.00
1	<b>POWER AMPLIFIERS</b>				0.00
(i)	Supply, installation , testing & commissioning of dual channel power amplifier, rated output power 870W per channel @ 4 Ohms, bridge O/P 1250W @4 Ohms, power O/P maximum average Professional power in watts with @0.5% THD, frequency response 20- 20000 Hz, Input impedance 20 K Ohms , thermal, DC, short circuit, overload protection with fan cooling. <b>Make : CROWN / QSC / QUEST/Electro voice</b>	2	Each No.	215,000.00	430,000.00
2	<b>POWER AMPLIFIERS</b>				0.00
(i)	Supply, installation , testing & commissioning of Professional four channel power amplifier, rated output power 120 W per channel Hz SNR > 95 db, signal to noise ratio 86 dB, sensitivity 1V@ 10 K Ohms, thermal, high temp, DC, short circuit, overload, protection with fan cooling. <b>Make : CROWN / QSC / QUEST/Electro Voice</b>	1	Each No.	167,000.00	167,000.00
3	<b>MIXING CONSOLE</b>				0.00
(i)	Supply, installation , testing & commissioning of Professional 16 mic input channels Audio Mixing Console, 4 Aux send, Input EQ 4 band, output EQ 4 band semi parametric, 2 dual stereo input with 2 band EQ, phantom power switches, lamp socket and back ground music mode switch. <b>Make : YAMAHA / ALLEN &amp; HEATH/ SOUND CRAFT/Electro Voice.</b>	1	Each No.	345,000.00	345,000.00
4	<b>LOUDSPEAKERS</b>				0.00
(i)	Supply, installation , testing & commissioning of 3-way, high-output, full range Loudspeaker System, consisting of Two (2) 15 inch dia. LF Driver & one (1)1.5 inch exit HF Compression on Progressive Transition Waveguide true feature for well controlled coverage, low distortion and smooth response, high frequency Driver protection, frequency response 40-20 KHz, sensitivity 99 dB SPL power handling capacity 900W, frequency response 50-20000 Hz. Make : <b>YAMAHA / JBL Professional / QUEST/Electro voice</b>	1	Each Pair.	209,000.00	209,000.00
5	<b>LOUDSPEAKERS</b>				0.00

(i)	Supply, installation , testing & commissioning of 2-way, high-output, full range Loudspeaker System, consisting of One (1) 15 inch dia. LF Driver & one (1)1.0 inch throat driver, 45 mm titanium diaphragm, HF dispersion 90 x 50 Waveguide true feature for well controlled coverage, low distortion and smooth response, high frequency Driver protection, frequency response 45-20 KHz, sensitivity 98 dB SPL power handling capacity 450W, crossover frequency 1.7 KHz passive 18 <b>Make : YAMAHA / JBL/Electro voice</b>	2	Each Pair.	183,000.00	<b>366,000.00</b>
6	<b>LOUDSPEAKERS</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of 2-way, high-output, full range Loudspeaker System, consisting of One (1) 12 inch dia. LF Driver & one (1)1.0 inch throat driver, titanium diaphragm, HF dispersion 90 x 60 Waveguide true feature for well controlled coverage, low distortion and smooth response, high frequency Driver protection, frequency response 55-20 KHz, sensitivity 97 dB SPL power handling capacity 250W, crossover frequency 2 KHz passive 18 <b>Make : YAMAHA / JBL Professional/Electro voice</b>	1	Each Pair.	95,000.00	<b>95,000.00</b>
7	<b>LOUDSPEAKERS</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of 2-way, high-output, full range Loudspeaker System, consisting of One (1) 8 inch dia. LF Driver & one (1)1.0 inch throat driver, titanium diaphragm, HF dispersion 90 x 60 Waveguide true feature for well controlled coverage, low distortion and smooth response, high frequency Driver protection, frequency response 50-20 KHz, sensitivity 95 dB SPL power handling capacity 200W, crossover frequency 2 KHz passive 18 <b>Make : YAMAHA / JBL /Electro voice</b>	4	Each Pair.	85,000.00	<b>340,000.00</b>
8	<b>SOUND CONTROL ROOM MONITORS SPEAKER.</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Professional 2-way monitor, 50W Program active design direct radiating bass reflex 8 inches dia. woofer, 3/4 inch HF, frequency response 70-20 KHz. Max SPL123 Db. Amplifier power HF 50 watts LF 100 watts. <b>Make : YAMAHA / JBL/Electro voice</b>	1	Each pair.	75,000.00	<b>75,000.00</b>
					<b>0.00</b>
9	<b>GRAPHIC EQUALIZER</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Professional dual channel 31 bane graphic equalizer, Number of Bands 31+31, frequency response 20-20Khz, input level control $\pm 12$ dB, harmonic distortion < 0.006% @ 1 KHz, input / output matching 12 digit LED Bar Graph, dedicated mono subwoofer output with adjustable cross-over frequency. Signal to noise ratio 94 Db. Dynamic range of greater than 112 dB. Similar to 2031 <b>Make :bss dbx dod</b>	1	Each No.	56,000.00	<b>56,000.00</b>
10	<b>DVD/CD MUSIC PLAYER</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Professional Compact Disc Player with DOLBY Reduction feature (5.1) output. <b>Make : PHILIPS</b>	1	Each No.	5,500.00	<b>5,500.00</b>
11	Supply, installation , testing & commissioning of Surround Preamplifier of 8 true balanced line –level outputs with a feature of decode digital surround sound signals and output to their specific speaker output. 32 bit Digital Surround processing facility. <b>Make : DENON</b>	1	Each No.	197,000.00	<b>197,000.00</b>
12	<b>MICROPHONES :</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Professional Boundary Layer Stage pick-up Microphone for drama, condenser half-cardioid, frequency response 20-15 KHz., sensitivity 8 m V / Pa. Similar to MX 393/O <b>Make- SHURE</b>	2	Each No.	23,000.00	<b>46,000.00</b>
13	<b>MICROPHONES :</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Professional Vocal Microphone, dynamic cardioid frequency response 50- 15 KHz., sensitivity 1.3m V/Pa. <b>Make : SHURE</b>	2	Each No.	8,500.00	<b>17,000.00</b>

14	<b>MICROPHONES :</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Professional Instrument Microphone, dynamic cardioid, frequency response 40- 15 KHz. sensitivity 1.6 m V/Pa. Make : <b>SHURE</b>	2	Each No.	7,300.00	<b>14,600.00</b>
15	<b>MICROPHONES :</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Slim-line Goose-neck Podium Microphone, condenser /dynamic super cardioid, frequency response 50- 17 KHz., sensitivity 11.5 m V/Pa. Make : <b>SHURE</b>	1	Each No.	17,200.00	<b>17,200.00</b>
16	<b>MICROPHONES :</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of General Purpose Microphone, dynamic cardioid, frequency response 50- 15 KHz., sensitivity 1.5 m V/ Pa. Similar to PG57 Make : <b>SHURE</b>	2	Each No.	4,600.00	<b>9,200.00</b>
17	<b>MICROPHONES :</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Wireless (UHF) Microphone System with double antenna Receiver and Hand-held Microphone with built-in transmitter. Oscillation mode Quartz controlled changeable frequency, output Level &Dynamic Range should be accurately pre-adjusted to equal to the microphone capsule sensitivity to ensure optional performance. Similar to SLX2/SM58 Make : <b>SHURE</b>	1	Each No.	62,000.00	<b>62,000.00</b>
18	<b>AMPLIFIER RACK</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Mild Steel constructed power coat painted equipment rack for housing of all amplifier, Equaliser, DVD player, processor, receiver unit of all cordless mic., drawer for mixing console with lockable front and rear doors, pre-wired wiring and power panel with ventilation path.	1	Each No.	37,500.00	<b>37,500.00</b>
19	<b>MICROPHONE STAND</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Floor mounted type chromium plated adjustable microphone stand.	6	Each Set.	1,750.00	<b>10,500.00</b>
20	<b>CABLES</b>				<b>0.00</b>
(i)	14/0.2 ATC PVC insulated 2 core screened with overall PVC sheathed Low-noise microphone Cable & Connectors. 40 / 0.2 ATC PVC insulated 2 core twisted with overall PVC sheathed Low-resistance loud speaker Cable & Connectors. Make : <b>Eagle</b>	1	Each Job	143,000.00	<b>143,000.00</b>
21	<b>ACCESSORIES</b>				<b>0.00</b>
(i)	Supply, installation , testing & commissioning of Microphone 20 way Patch Panels 1 No., microphone dip box 5 No., Loud speaker Junction Boxes, Microphone cord with XLR Connectors of 10 M. length 14 Nos., Patch panel cord with XLR connectors of 2.5 M length 18 Nos. and other installation accessories.	1	Each Lot.	35,000.00	<b>35,000.00</b>
22	<b>Supplying ,installation,testing and commissioning of 20KVA (MakeAPC,V-GUARD) tru online smart UPS system with.....engineer-in-charge.</b>	1	Each No.	370,000.00	<b>370,000.00</b>
					<b>0.00</b>
	<b>AIRCONDITIONER(PAC UNIT)</b>				<b>0.00</b>
1	Volta/Blue star make air-cooled <b>out-door condensing units</b> comprising Manourop/Copland/Donfoss/LG/Emerson hermetic type <b>SCROLL compressors</b> , copper-tube-aluminium-Blue-finned with anti corrosion condenser coil, condenser cooling fan, fan-motor, ,contactor/starters, safty controls, internal wirings,, facilities for gauge connection and refgt. gas charging port, ball type shut-off valves at suction & discharge ports of each compressors, weather-proof cabinet for housing the above items etc as required and as detailed in the spcification				<b>0.00</b>

(i)	22.0 TR	2	Nos	379,000.00	<b>758,000.00</b>
(ii)	7 TR	2	Nos	218,000.00	<b>436,000.00</b>
2	Microprocessor based control system(for both outdoor & indoor units) with LED display, enunciator for fault diagnosis, and other features as detailed in the specification ( for both Packaged & Ductable Split Units)	4	sets	Included	
3	Refrigerant copper piping inter connecting respective condensing units with refrigerant grade hard drawn copper tubes complete with liquide line stainer, filter, drier, pipe supports complete with insulation.				<b>0.00</b>
(i)	Suction line with insulation	90	Rmt	1,105.00	<b>99,450.00</b>
(ii)	Liquide line	90	Rmt	750.00	<b>67,500.00</b>
4	Support & supension of condensing unit & evaporator unit including ribbed neotreneVI pads, flexible connection at blower outlets.	6	Nos	2,875.00	<b>17,250.00</b>
5	Condensate drain piping with 40mm nominal schedule 80 grid PVC pipes (minimum 4mm wall thickness) with U trapshaving provision for periodical cleaning.	60	Nos	207.00	<b>12,420.00</b>
6	Design, Supply, Fabrication & erection of air distribution GSS Ducting in accordance with the approved ducting layout drawing.				<b>0.00</b>
(i)	20G GP Sheet				<b>0.00</b>
(ii)	22G GP Sheet	70	Sqm	970.00	<b>67,900.00</b>
(iii)	24G GP Sheet	290	Sqm	820.00	<b>237,800.00</b>
7	Acouastic insulation inside the SA ducts with 25mm thick F.G., Tissue paper & 36G perforated aluminium	75	Sqm	790.00	<b>59,250.00</b>
8	Niterl rubber insulation over the ducts	200	Sqm	805.00	<b>161,000.00</b>
9	Providing and connecting canvas in mouth piece.	4	Nos	8,500.00	<b>34,000.00</b>
10	Dynacraft/Metal Forge/Carrier or equivalent make linear grills or extruded aluminium section finished with power coated of approved color.				<b>0.00</b>
(i)	Grilles/Diffusers	10	Sqm	12,500.00	<b>125,000.00</b>
(ii)	VCD	5	Sqm	3,500.00	<b>17,500.00</b>
11	Laying control copper wire outdoor unit to indoor unit as required to complete th work.				<b>0.00</b>
(i)	14c x 1.5Sq.mm.	100	Rmt	320.00	<b>32,000.00</b>
12	Fresh Air Privision with Bird Screen & Cowl	2	Nos	4,200.00	<b>8,400.00</b>
13	Commisioning, Testing, Balancing the A.C. system & handing over the same to the authorityu in satisfactory working condition.				<b>0.00</b>
(i)	22 TR	2	Nos	20,000.00	<b>40,000.00</b>
(ii)	7TR	2	Nos	15,000.00	<b>30,000.00</b>
					<b>0.00</b>
	<b><u>Fire Extinguishers (Make- Cease Fire/ Fire Shield/ UFS)</u></b>				<b>0.00</b>
1	Providing and fixing of W/ CO2 type fire extinguishers of 9 ltrs. capacity.	2	No.	15,410.00	<b>30,820.00</b>
2	Providing and fixing of DCP type fire extinguishers of 10 kgs. Capacity.	2	No.	8,625.00	<b>17,250.00</b>
3	Providing and fixing of CO2 type fire extinguishers of 4.5 ltrs. capacity.	2	No.	6,500.00	<b>13,000.00</b>
4	Providing and fixing of ABC type fire extinguishers of 10 kgs. capacity.	2	No.	11,270.00	<b>22,540.00</b>
5	Providing and fixing of Fire Alarm Hooter.	2	No.	2,988.00	<b>5,976.00</b>
<b>B</b>	<b>INTERNAL ELECTRIFICATION WORK</b>				<b>0.00</b>



<b>1</b>	Recessed wiring to Different Points with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non metallic PVC flexible conduit with 5 Amp, 250 V one way modular switch ISI marked and ceiling rose ISI marked mounted on MS Box having front bakelight cover of suitable size, MS Box with 1.0 sq. FR PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection as per direction of Engineer in charge . ( Make of wire Finolex / L &T / Anchor / Havels/ V guard/HPL)				<b>0.00</b>
<b>(a)</b>	Angle Holder Point	18	Nos	931.91	<b>16,774.38</b>
<b>(b)</b>	Tube Light Point	40	Nos	940.82	<b>37,632.80</b>
<b>(c)</b>	Bulkhead Point	4	Nos	948.38	<b>3,793.52</b>
<b>(d)</b>	Mirror light point	4	Nos	931.91	<b>3,727.64</b>
<b>(e)</b>	Portico light point	1	Nos	940.79	<b>940.79</b>
<b>(f)</b>	Hall ligh Point	120	Nos	931.91	<b>111,829.20</b>
<b>2</b>	Recessed wiring to Security light point with 1.5 sqmm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non metallic PVC flexible conduit with 20 Amp,250 V piano type switch ISI marked and ceiling rose ISI marked mounted on MS Box having front bakelite cover of suitable size,MS Box with 1.0 sq.FR PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection as per direction of Engineer in charge (Make of wire Finolex/L & T/Anchor/Havels/V guard)	8	Nos	955.55	<b>7,644.40</b>
<b>3</b>	Recessed wiring to <b>Ceiling fan points</b> with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non metallic PVC flexible conduit with 5 Amp, 250 V piano type switch ISI marked and ceiling rose & step type electronic regulator ISI marked mounted on MS Box having front bakelight cover of suitable size, MS Box with 1.0 sq. FR PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection as per direction of Engineer in charge . ( Make of wire Finolex / L &T / Anchor / Havels/ V guard)	6	Nos	940.79	<b>5,644.74</b>
<b>4</b>	Supply of U-Type fan hook	6	Nos	89.70	<b>538.20</b>
<b>5</b>	supply of Step type Mini electronics Regulator	6	Nos	249.61	<b>1,497.66</b>

6	Point wiring for 5/ 6 amp socket outlet ( Separate) ( MODULAR) with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor ISI marked in recess 20 mm dia non metallic PVC flexible conduit with 5 Amp, 250 V modular type switch <(>&<)> socket , phenolic laminated sheet suitable size ISI marked MS Box <(>&<)> earthing Point with 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing etc as required as per direction of Engineer in charge . ( Make of wire Finolex / L <(>&<)>T / Anchor / Havels/ V guard)	32	Nos	713.09	<b>22,818.88</b>
7	Recessed wiring to <b>Exhaust fan points</b> with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non metallic PVC flexible conduit with 5 Amp, 250 V piano type switch ISI marked and ceiling rose ISI marked mounted on MS Box having front bakelight cover of suitable size, MS Box with 1.0 sq. FR PVC insulated single core multistrand copper conductor as earth wire including all accessories and connection as per direction of Engineer in charge . ( Make of wire Finolex / L &T / Anchor / Havels/ V guard)	6	Nos	940.79	<b>5,644.74</b>
8	Point wiring for <b>5/ 6 amp socket outlet</b> with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor ISI marked in recess 20 mm dia non metallic PVC flexible conduit with 5 Amp, 250 V piano type switch & socket , phenolic laminated sheet suitable size ISI marked MS Box & earthing Point with 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing etc as required as per direction of Engineer in charge . ( Make of wire Finolex / L &T / Anchor / Havels/ V guard)	24	Nos	520.78	<b>12,498.72</b>
9	Point wiring for <b>15/16 amp socket outlet</b> with 4.0sq.mm FR PVC insulated single core multistrand copper conductor ISI marked in recess 20 mm dia non metallic PVC flexible conduit with 5 Amp, 250 V piano type switch & socket , phenolic laminated sheet suitable size ISI marked MS Box & earthing Point with 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing etc as required as per direction of Engineer in charge . ( Make of wire Finolex / L &T / Anchor / Havels/ V guard)	34	Nos	964.75	<b>32,801.50</b>
10	Recessed wiring to submain in 2 x 2.5 sqmm FR PVC insulated single core multistarnd copper conductor of ISI marked confirming to IS-694/1990 in 20 mm dia non metallic heavy duty flexible conduit 1.6 mm thick along with 1 x 1.5 sqmm FR PVC insulated single core multistrand copper conductor as earth wire as required from BDB to Swich board as per direction of Engineer in charge(Make of wire Finolex / L &T / Anchor / Havels/ V guard)	400	Mtr	137.57	<b>55,028.00</b>

11	Recessed wiring to submain in 2 x 4 sqmm FR PVC insulated single core multistarnd copper conductor of ISI marked confirming to IS-694/1990 in 20 mm dia non metallic heavy duty flexible conduit 1.6 mm thick along with 1 x 1.5 sqmm FR PVC insulated single core multistrand copper conductor as earth wire as required (Make of wire Finolex / L & T / Anchor / Havels/ V guard) ( CSR SL .No- 1.8.3)	700	Mtr	154.75	<b>108,325.00</b>
12	Recessed wiring to submain in 2 x 6 sqmm FR PVC insulated single core multistarnd copper conductor of ISI marked confirming to IS-694/1990 in 20 mm dia non metallic heavy duty flexible conduit 1.6 mm thick along with 1 x 2.5 sqmm FR PVC insulated single core multistrand copperconductor as earth wire as required (Make of wire Finolex / L & T / Anchor / Havels/ V guard) ( CSR SL .No- 1.8.4)	150	Mtr	184.91	<b>27,736.50</b>
13	Recessed wiring to submain in 4 x 10 sqmm FR PVC insulated single core multistarnd copper conductor of ISI marked confirming to IS-694/1990 in 32 mm dia non metallic heavy duty flexible conduit 1.6 mm thick along with 2 x 4 sqmm FR PVC insulated single core multistrand copper conductor as earth wire as required (Make of wire Finolex / L & T / Anchor / Havels/ V guard) ( CSR SL .No- 1.8.11)	120	Mtr	407.97	<b>48,956.40</b>
14	Supply and laying of 4 Core x 10 sqmm Cu Flexible from FDB AC to outdoor unit of 17.0 Tr AC including all connection as per instruction of Electrical Engineer-in-charge	150	Mtr	278.12	<b>41,718.00</b>
15	Supply and laying of 70 sq.mm 3.5 core PVC Al. Arm Cableof 1.1 KV grade ISI Marked direct in ground including excavation , sand cushioning ,protective covering and refilling the trench etc. as required. (Sl. No-25 sl no- 5.1.2)	40	Mtr	486.85	<b>19,474.00</b>
16	Supply and laying of 120 sq.mm 3.5 core PVC Al. Arm Cableof 1.1 KV grade ISI Marked direct in ground including excavation , sand cushioning ,protective covering and refilling the trench etc. as required. (Sl. No -25 sl no- 5.1.2)	25	Mtr	821.02	<b>20,525.50</b>
17	Supply and fixing of 4 way mcb Box with 32 Amp TPN MCB & 12 nos 20 amp SPMCB with sheet steel encloser , distribution board, on surface/ recess, complete with tinned copper bus bar , neutral bus bar,earth bar , din bar , detachable gland plate, interconnection , phosphate and power painted including earthing etc as required. ( Sl. No- 2.7.4, 2.5 & 2.9)	2	Set	4,548.13	<b>9,096.26</b>

18	<p>Main Distribution Board -Incoming power Distribution panel/ board suitable for flush mounted type made of 14 SWG sheet with MS angles channels suitable sizes, gasket, powder coated, top &amp; bottom terminals and properly painted with anticorrosive primer and paints, comprising the following: [Make-(a)Make-(a)MCB/MCB BOX - Legrand/ Schnider/Havells Crabtree/ ABB, ( b)Volt meter, Ammeter-AE/IMP, (d) all other accessories ISI mark]</p> <p>Incoming- 1 No 630 Amp FP MCCB[50 KA]</p> <p>Outgoing - Busbar : 4 Nos 800A, 500V Electrolytic copper strips 4 Nos. 100 Amp. FPole MCB[25 KA]. 4 Nos. 63 Amp. FPole MCB. 4 Nos. 200 Amp. DPole MCB[35KA].</p> <p>Instrument - 03 Nos. Multi-function meters showing voltage, current, pf, frequency, MD and THD with required 500/5A CTs 03 Nos : LED type phase indicating lamps with control fuses &amp; toggle switches.</p>	1	Set	260,000.00	<b>260,000.00</b>
19	<p>Supply and Fixing of 200 AMP. TPMCCB [35 KA] with 200 AMP. 415 VOLT CUTOOUT - 03 NOS WITHOUT METER SPACE with 200 AMP , 25 / 6 MM. COPPER BUS BAR - 04 NOS, INSTRUMENTS- 0 –200 AMP. AMMETER WITH SELECTOR SWITCH -01 SET ,200 / 5 AMP. CT - 01 SET, 0 – 500 VOLT. VOLTMETER WITH SELECTOR SWITCH - 01 SET ,INDICATING LAMP WITH CONTROLLING SWITCH - 01 SET including all accessories and connections as per instruction of Electrical Engineer-in- Charge. [make-(a)Mcb /Mccb - Legrand/ Schnider/Havells Crabtree/ ABB, ( b)volt meter, ammeter-AE/IMP, (d) all other accessories ISI mark]</p>	1	Set	₹ 57,845.00	<b>57,845.00</b>

20	<p>Supply and Fixing of floor / wall mounted main pannel board made out of 16 swg. c.r sheet duly powder coated having following arrangements.[duly wired with socketing] all main switches – (simens / l&amp;t / hpl / abb ) .[make-(a)make-(a)mcb/mcb box - legrand/ schnider/havells crabtree/ abb, ( b)volt meter, ammeter-ac/imp, (d) all other accessories isi mark] size of copper bus bar - as per rating of incoming main switch with copper nut bolt neutral link – as per main switch current rating voltmeter &amp; ammeter – ae / cappa indicator – led selector switch – salzar / surdhi bus bar insulator – resin cast drum insulator bus bar chamber must be covered with 3 mm thick bakelite cover[national / royalam] in coming - 100 amp. TPMCCB - 1 no out going-100 amp .electrolyte cupper bus bar-4 nos arrangement of 15 compartments for 13 nos 1- ph energy meter &lt;(&gt;&amp;&lt;)&gt; 2 Nos 3 ph energy meter alongwith 13 nos 63 amp DPMCB &lt;(&gt;&amp;&lt;)&gt; 2 Nos 63 Amp 4P MCB with locking arrangement individually. instruments volt meter -0-500 v - 1 set-ammeter with ct -0-100a - 1 set indicator with toggle switch (RYB)-3 nos</p>	1	Set	149,677.56	<b>149,677.56</b>
21	Supply and fixing of 9 WT. LED Bulb installred at angle holder/ batten holder. Make- CROMPTON/ PHILIPS/ WIPRO)	18	Nos	120.75	<b>2,173.50</b>
22	Supply and fixing of 4 FT 20 W LED Tube light fitting with lamp including fixing and connections as per instruction of Electrical Engineer-in-charge .( Make-CROMPTON/ PHILIPS/ WIPRO)	40	Nos	758.99	<b>30,359.60</b>
23	Supply and fixing of 1200 mm sweep AC ceiling fan (5 star rated ) with connecting wire and all accessories including hanging and connections as per instruction of Electrical Engineer-in-charge.- [MAKE-KHAITAN/USHA/ CROMPTON GREAVES)	6	Nos	1,874.17	<b>11,245.02</b>
24	Supply and fixing of SURFACE MOUNTED LED 12 W SQUARE/ROUND PORTICO LIGHT WITH POWDER COATED FINISHED IN WHITE HOUSING 1with lamp , choke, connecting wire, and all accessories and connections as per instruction of Electrical Engineer-in-charge.( Make-CROMPTON/ PHILIPS/ WIPRO)	1	Nos	1,322.50	<b>1,322.50</b>
25	Supply and fixing of 8 Watt Mirror light connecting wire, and allaccessories and connections as per instruction of Electrical Engineer-in-charge.( Make-CROMPTON/ PHILIPS/ WIPRO)	4	Nos	511.18	<b>2,044.72</b>
26	Supply and fixing of 300 mm sweep exhaust fan with connecting wire and all accessories including fixing and connections as per instruction of Electrical Engineer-in-charge. - [MAKE- KHAITAN/USHA/ CROMPTON GREAVES)	6	Nos	2,024.00	<b>12,144.00</b>

27	Supply and fixing of Bulk Head fitting with 9 wt. LED Bulb including all accessories and connections as per instruction of Electrical Engineer-in-charge.( Make-CROMPTON/ PHILIPS/ WIPRO)	4	Nos	887.80	3,551.20
28	Supply & fixing of 45 Wt. LED Street light fitting comprises of Pressure die cast Aluminium housing powder coated in silver grey and toughened glass, Surge Arrester 1 No & 100lum/wt, Protection IP66 with bulb,choke,cover,G.I bracket,clamp & nut bolt connecting wire all accessories ( Make- CROMPTON/ PHILIPS/ WIPRO)	8	Nos	5,037.00	40,296.00
29	Supply & fixing of 400MM (16") WALL MOUNTED FAN WITH COMPLETE ACCESSORIES[BROWN/WHITE],including hanging and connections as per instruction of Electrical Engineer-in-charge[MAKE-KHAITAN/USHA/CROMPTON GREAVES)	32	Nos	2,024.00	64,768.00
30	Supply, installation, testing & Commissioning of maintenance free chemical earthing having enhancing chemical compound with 3 Mtr. Long copper bonded steel rod and suitable termination clamp including all accessories. <b>Make :- ABB / STAR-X / UNIVERSAL</b> All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge.	3	No	₹ 15,200.00	45,600.00
31	Supply and fixing of 25/3mm hot dip galvanised iron flat from earth pit to MDB,FDB by saddling with G.I saddle including all accessories and connections	200	Rft	₹ 85.00	17,000.00
32	Supply and fixing of 16/18 SWG metal box of following size on surface/recess with suitable size of phenolic laminated sheet cover in front including cutting the wall and making good the same case of recessed conduit as required.				0.00
a	6'x4' G.I board	2	Nos	52.66	105.32
b	8"x10"G.I board	2	Nos	115.98	231.96
c	8"x6" G.I board	2	Nos	74.93	149.86
33	Supplying and fixing of different size modular GI Box 18 swg with Modular base & cover including all accessories. .				0.00
a	12 module	10	Nos	₹ 381.76	3,817.60
b	8 module	8	Nos	₹ 270.11	2,160.88
c	6 module	8	Nos	₹ 228.70	1,829.60
d	2 module	10	Nos	₹ 123.81	1,238.10
e	4 module	10	Nos	₹ 170.63	1,706.30
f	Blanking Plate	35	Nos	₹ 19.61	686.35
34	Supply and fixing of Earthing with GI earth pipe 3 meter long 40 mm dia ISI marked including accessories and providing masonry enclosure with cover plate having locking arrangement and water pipe etc with charcoal and salt as required( CSR Sl. No- 3.2, )	1	Nos	₹ 2,411.18	2,411.18
35	Providing and fixing 8 SWG (4mm ) dia copper wire on surface or in recess for loop earthing as required. ( csr sr.no- 3.18)	40	Rft	26.50	1,060.00
C	<b>LIGHTENING PROTECTION SYSTEM</b>				

1	<p><b><u>Air-Terminal</u></b> Supply, Installation, Testing &amp; Commissioning of Early Streamer Emission (ESE) type lightning Air terminal.</p> <p><b><u>Supporting Mast</u></b> The mounting pole used to support the lightning air terminal shall be minimum length of 05 Mtr. , non corrosive and made up of medium class GI / SS pipe of 1.5" diameter having base plate at bottom for securely fixing the mast on roof top. The mounting pole and supports shall be securely fixed with the brackets and PVC insulated metallic guy wires to withstand the maximum wind velocity of that area.</p> <p><b><u>Protection Radius :- 48 Mtr.</u></b> <b>Make :- ABB / STROMKING / POWER TRAC</b> All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge.</p>	1	No	₹ 97,850.00	<b>97,850.00</b>
2	<p><b><u>Lightning Strike Counter</u></b> Supply, Installation, Testing &amp; Commissioning of non-electronic &amp; non-resettable (Not require any external power supply) type lightning strike counter to count the lightning stroke having display with IP-67 enclosure including all accessories and connection..(6/7 digit)</p> <p><b>Make :- ABB / STROMKING / POWER TRAC</b> All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge.</p>	1	No	₹ 25,000.00	<b>25,000.00</b>
3	<p>Supply, Installation, Testing &amp; Commissioning of 25 x 5 MM copper flat (Insulated / through 1.5" diameter super quality PVC pipe) from lightning air terminal to earth electrode on wall / ceiling/concrete column/under buried trench by proper saddling &amp; making connection at both ends the and making good the damages caused. All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge</p> <p><b>Make of PVC Pipe :- AKG / KINJAL / ORIPLAST S..(CSR SL . NO- 3.11) .</b></p>	45	Mtr.	509.11	<b>22,909.95</b>
4	<p>Supply, Installation, Testing &amp; Commissioning of maintenance free chemical earthing having enhancing chemical compound with 3 Mtr. Long copper bonded steel rod and suitable termination clamp including all accessories.</p> <p><b>Make :- ABB / STAR-X / UNIVERSAL</b> All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge.</p>	3	No	₹ 15,200.00	<b>45,600.00</b>

5	Supply, connection & Testing of sub earthing with 16 Sq.mm single core multi stranded copper flexible wire from surge protection device (SPD) panel to earth electrode & Main panel board to SPD panel including all accessories, cable socketing and connections. <b>Make :- FINOLEX / ANCHOR / HAVELLS</b> All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge.	18	Mtr.	₹ 154.73	<b>2,785.14</b>
6	Supply, Installation, Testing & Commissioning of indoor type wall mounted <b>Surge protection device (SPD)</b> panel made of 2 mm thick CRCA sheet, dust and vermin proof duly powder coated having the following arrangement & complete factory wired by 16 Sq.mm single core multi stranded copper flexible wire. [A] Type 1+2 AC Surge Protection Device (SPD) (TP+N) (50 KA) - 01 Set [B] 63 Amp. HRC fuse with link – 03 Nos [C] 100 Amp. 4 pole stud connector – 01 No Make of SPD & HRC Fuse :- HAVELLS / L&T / LEGRAND <b>Make of Wire :- FINOLEX / ANCHOR / HAVELLS</b> All the work should be carried out as per the specified specifications and instruction of the Engineer-in-Charge.	1	No	18,665.00	<b>18665</b>
	Total Rs.				<b>8775314.73</b>
	Cess@1%				<b>87753.15</b>
	Total Estimated Cost in Figures.				<b>8863068.00</b>
EXCESS <input type="checkbox"/> LESS <input type="checkbox"/> (Please Tick) _____%					
Quoted Amount in Figures.					
Quoted Amount in words					

**N.B-The Estimate Cost is Exclusive of G.S.T i.e. @ 12%**

**Signature of Tenderer with seal**

Sd/-  
Asst. Project Manager (Elect.)

Sd/-  
Asst. Project Manager Elect.(Hqr)

Sd/-  
Joint Manager (Elect.)