

NAME OF WORK: Construction of New Multipurpose Indoor Stadium at Mundayad , Kannur

1 INTERNAL & ELECTRICAL WORKS

Part B

A 11 KB SUB STATION

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
A-1	Supply, installation, testing and commissioning of Indoor unitised package substation comprising the following modules completely interconnected with Aluminium busbars and the whole assembly etc. as required					
	a) Indoor incoming module with 1 no. 11 KV, 630 A, 26.2 KA, Load breaking, Fault making, air break switch suitable for 11 KV, 3 phase, 50 Hz AC supply with interlocked earth switch, suitable HT HRC fuses, fixed type PT of 11KV/110V ratio, Class 0.5 accuracy ,CT of **/5A ratio,(**CT ratio shall be confirmed by Engineer In Charge) 15 VA, Class 0.5 accuracy , shunt trip coil,Space heater with thermostat, interconnectionbus bars with insulators,provision for fixing TOD meter etc as required.					
	b) Indoor outgoing module comprising 1 no. 3 phase 50 Hz, resin cast dry type naturally air cooled step down indoor transformer of 315KVA capacity, copper wound having delta primary & star secondary with neutral brought out and having no-load voltage ratio 11 KV/433 V, vector DYN-11 with tappings from +5% to -10% in steps of 2.5 % operatable with Off circuit , interconnected with suitable size of Bus bars with incoming module, along with 1 No 800A fixed type TPN ACB with thermal magnetic release, for connecting 2 Nos cables of suitable size on outgoing side, with winding temperature indicator and all other standard accessories etc as required.					
	<i>Note: Lay out of the unitised package substation with all relevant dimensions shall be prepared by the contractor in consultation with the Engineer-in-charge to suit the site requirements and the same shall be got approved by the Engineer-in-charge before commencement of the work.</i>					
	Complete as above	Job	1.00	1747836	seventeen lakh forty seven thousand eight hundred and thirty six only	1747836
A-2	Supply & laying of 11 KV grade XLPE cable in original position with sand cushioning & protective covering (in ordinary soil)					
	Supply & laying of 1 no. 11 KV grade XLPE cable of the following sizes in ground including excavation of trench of size 35 x 120cm, sand cushioning up to a height of 25cm, providing protective covering with country burnt bricks laid breadth wise, refilling the trench etc. as required (in ordinary soil).					
	3 core 300 sq mm	m	240.00	2767	Two thousand seven hundred and sixty seven only	664080
A-3	Supply & laying of 11 KV grade XLPE cable in additional position with sand cushioning & protective covering (in ordinary soil)					
	Supply & laying of 1 no. additional 11 KV grade XLPE cable of the following sizes in ground including excavation of trench of size 35 x 120 cm, sand cushioning up to a height of 25 cm, providing protective covering with country burnt bricks laid breadth wise, refilling the trench etc. as required (in ordinary soil).					
	3 core 300 sq mm	m	20.00	2711	Two thousand seven hundred and eleven only	54220
A-4	Supply & laying of 11 KV grade XLPE cable through existing conduit.					
	Supply & laying of one number 11 KV grade XLPE cable of the following sizes in the existing RCC/ HUME / STONE WARE/ GI/ DWC pipe as required.					
	3 core 300 sq mm	m	20.00	2478	Two thousand four hundred and seventy eight only	49560
A-5	Supply & laying of 11 KV grade XLPE cable in existing masonry open duct					
	Supply & laying of one No. 11 KV grade XLPE cable of the following sizes in the existing masonry open duct as required.					
	3 core 300 sq mm	m	20.00	2467	Two thousand four hundred and sixty seven only	49340

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
A-6	PROTECTIVE PIPES TO CABLES					
	Supplying, laying and jointing of the following sizes of double wall corrugated (DWC) pipes made out of HDPE conforming to IS 14930 Part II for mechanical protection to underground power cables with all required accessories in ground including excavation of trench to a depth of 75 cm and refilling the trench with the excavated soil etc as required (in ordinary soil)					
	110 / 94 mm or nearest size	m	20.00	249	Two hundred and forty nine only	4980
A-7	ROUTE - MARKER					
	Supplying and fixing route marker with cement concrete 1:2:4 of size 60x60 cm at the bottom and 50x50 cm at the top with a thickness of 10cm including inscription as required.	E	12.00	194	One hundred and ninety four only	2328
A-8	Supplying and making indoor end termination with push-on end termination kit (earthed) for 11 KV grade XLPE cable of the following sizes including supply of end sealing kit consisting of stress-cum-semi conducting pad, sliding core, self bonding insulating tape, boot (with 3 core kit), earth continuity connection (with 3 core kit), earthing lug (with 1 core kit), adhesive-cum-solvent, PVC (NA) tape, silicon grease, aluminium crimping lug, aluminium oxide cloth, nylon string, copper binding wire, hose clamp and bi-metallic washer etc. as required.					
	3 x 300 sq mm	E	3.00	10390	Ten thousand three hundred and ninety only	31170
A-9	Supplying and making outdoor end termination with push-on end termination kit (earthed) for 11 KV grade XLPE cable of the following sizes including supply of end sealing kit consisting of stress-cum-semi conducting pad, cap, rain shield, self bonding insulating case, leakage current collector, protective corrugated hose pipe, boot, earth continuity connection (with 3 core kit only), earthing lug (with 1 core kit), adhesive-cum-solvent, PVC (NA) tape, silicon grease, aluminium crimping lug, aluminium oxide cloth, nylon string, copper binding wire, hose clamp and bi-metallic washer etc. as required.					
	3 x 300 sq mm	E	1.00	11618	Eleven thousand six hundred and eighteen only	11618
A-10	Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top. (in hard soil)	E	2.00	9360	Nine thousand three hundred and sixty only	18720
A-11	Supply and providing plate earthing as per IS 3043 with 600x600x6.00 mm copper earth plate, 20 mm GI watering pipe fixed to the earth plate with 20 x 3 mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top. (in hard soil)	E	8.00	14383	Forteen thousand three hundred and eighty three only	115064

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
A-12	Supply and providing <i>test joint for the earthing system</i> using 2 Nos of the following sizes of strips including cutting and bending to shape, drilling necessary holes and fixed to the watering pipe etc as required.					
a	2 x 50 x 6 mm GI strip	m	8.00	331	Three hundred and thirty one only	2648
b	2 x 32 x 3 mm tinned copper strip	m	32.00	610	Six hundred and ten only	19520
A-13	Supply and laying <i>strips</i> of the following sizes <i>along with wiring/ cables</i> and giving connection as required.					
a	25X6 MM GI strip	Mtrs	700.00	121	One hundred and twenty one only	84700
b	25X6MM copper strip tinned at the points ofcontacts	Mtrs	100.00	809	Eight hundred and nine only	80900
c	25X3MM GI strip	Mtrs	700.00	62	sixty two only	43400
A-14	Supply and laying the following sizes of <i>strips</i> laid 0.60 m <i>below ground</i> level including excavating trench of suitable size and refilling etc. as required (<i>in ordinary soil</i>).					
a	25 x 6 mm GI strip	m	500.00	137	One hundred and thirty seven only	68500
b	25X6MM copper strip tinned at the points ofcontacts	Mtrs	50.00	865	Eight hundred and sixty five only	43250
c	32X6MM copper stripe tinned at the points of contacts	Mtrs	100.00	1091	One thousand ninty one only	109100
A-15	Supply and providing <i>earth lead from the test joint to the earth electrode</i> using the following sizes of conductors/ strips including cutting, drilling necessary holes (in case of strip) and fixing firmly with plate test joint etc as required.					
	4.00 mm bare GI conductor (8 SWG)	m	1500.00	11	Eleven only	17100
A-16	Supplying & erecting rolled steel joist (I- section) pole 150x80 mm (14.9 kg/meter) minimum & 11 mtr long complete and duly painted with 2 coats of red oxide paints and one coat of bituminous paint for the length to be embedded in ground and plinth & 2 coats of aluminium paints for the remaining portion above ground complete with M.S base plate of size 30cm x30cmx 6mm thick welded at the bottom complete embedded in RCC foundation.	Nos	2.00	36800	Thirty six thousand and eight hundred only	73600
A-17	Supplying & erecting ISMC 100x 50mm with 4.7 mm thick web & 7.5 mm thick with clamps, Ms angle for cross arm of suitable length fabricated for high tention insulator mounting and provided with clamps of 50mm x6mm M.S flats and 16 mm nuts & bolts for each cross arm duly painted with one coat of red oxide primer and 2 coats of silver paint.	K.G	300.00	120.00	One hundred and twenty only	36000
A-18	Supplying and erecting ACSR conductor of size 6/2.11 mm (squirrel) complete , erected for over head line with stringing and blinding with proper size of aluminum conductor for binding and suitable size of PG clamps jump ring lugs , required extra thick alkethene pipe etc. complete (weight of ACSR conduct 85 Kg per 1000m)	Mtrs	60.00	320	Three hundred and twenty only	19200

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
A-19	Supplying and erecting approved make thyrite type lightning arrester suitable for 11 KV supply with necessary ancillary materials and accessories complete , erected on the cross arm provided and connected to the over head lines.	Nos	3.00	1600	One thousand six hundred only	4800
A-20	Supplying and erecting porcelain disc type insulator 11 KV line complete erected with all accessories and nuts and bolts on cross arm provided.	Set	3.00	1920	One thousand nine hundred and twenty only	5760
A-21	Supplying and erecting porcelain pin type insulator suitable for 11 KV line complete erected with all accessories and nuts and bolts on existing cross arm as required.	Set	18.00	640	Six hundred and forty only	11520
A-22	Supplying and erecting approved make 11 KV out door type gang operated air break triple pole switch , 400 amperes capacity , with 2 post pin type insulator per phase , mounted on horizontal or vertical position on cross arm provided with adequate length of GI pipe for operating handle erected on extended square shaft . The operating handle be provided with lock and key at suitable height from ground level with necessary clamp i/c providing copper flexible earthing as required.	Set	1.00	20800	Twenty thousand eight hundred only	20800
A-23	Supplying and erecting approved make 11 KV outdoor type drop out fuse unit complete with fuse holders , fuse barrel with metal fitting , fuse element mounted on M.S channel with working current of 50 Amps . Capacity and operated rod of suitable length complete erected on cross arm provided.	Set	3.00	1920	One thousand nine hundred and twenty only	5760
A-24	Supplying , erecting , testing , commissioning 11 KV H.T out door metering cubical (compact type)Licensee approved fabricated with 2 mm (14 SWG) M.S sheets with supporting anagle and channel , painted with powder coating or epoxy paint shade light gray , copper bus bar size 25x6mm eletronic security lock and Godrej make mechanical lock , with counter meter for measuring no of time s the opening of doors , top side cover (CTPT Cover) interlock with meter doors , i/c supplying fixing CTPT unit of suitable for 5/5A to 20/5A(As per the requirement by EnC) with burden 15 VA class 0.5 IL 12/28/75 KVP epoxy terminal block suitable for provided trivector meter, and provision for incoming and outgoing cables etc complete duly tested by licensee and with necessary test Certificates and erected on provided MS Channel	Nos	1.00	96000	Ninty six thousand only	96000
A-25	supply, installation, testing and calibration of TOD mter of class 0.5 accuracy suitable for use in HT tariff supply including loading, unloading , trasportation and calibartion of TOD meter along with exsiting ,CT PT unit in meter testing unit of KSEB including removing, loading , unloading, transporation, making payment of necessary testing fees, refixing and providing laying of 10CX2.5 Sq MM copper cable in suitable GI pipe for interconnection etc as required[Note: Meter should be KSEB approved make].	Job	1.00	39644	Thirty nine thousand six hundred and forty four only	39644
A-26	Providing & fixing including grouting and painting of angle iron welded wire mesh of (2"x1" size) 10SWG fencing of 1.8Mtrs height around the pole structure providing angle iron(38x38x6mm) supports at an interval of not more than 1.2Mts etc. as reqd. Bottom clearance of fencing shall be 150 mm for which brick work (kerb wall) 230 mm thick shall be done all around the fencing including cement plastering as required.	SqMtr	36.00	1000	One thousand only	36000
A-27	P/F including grouting, painting of M.S welded wire mesh door with M.S angle (38x38x 6mm) frame works having door size 1.8Mtrs height and 1.8 Mtrs width with locking arrangements with 230mm thick kerb wall below l/c plastrering,earthing etc.complete as reqd.	Job	1.00	6000	Six thousand only	6000
A-28	Supplying and spreading 40mm size stone metal in the Sub station yard to the height of 100mm as reqd.	Job	1.00	9000	Nine thousand only	9000
A-29	LAISON & CO-ORDINATION with KSEB and Electrical Inspectrate for the following.				Sixty four Thousand only	
a	Preparation and Submission of drawings and documents for scheme Approval before start work.					
b	To Survey & approval of installation location.					
c	Inspection and approval of the installation under scope of this tender (HT<).					
d	Co-Ordination with KSEB & EI for commissioning of the installation.	Job	1.00	64000		64000

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
e	any other activity / approval related to the scope of this tenderer.					
f	Submission of required test reports to EI& KSEB.					
g	Contractor shall pay statutory fees and this shall be reimbursed by the client against Original receipts.					
	TOTAL of 11 KV SUB STATION.					3646118

B) MV SWITCH BOARD

B	Fabrication, supply, conveyance, installation testing and commissioning of floor or wall mounting, dust and vermin proof, cubicle type MV panel board comprising of the following components/ devices & complying to IS 8623.					
B-1	Fabrication of fully partitioned, dust and vermin proof enclosure for <i>panel assembly</i> as per form 4 of IS 8623 (with latest amendments) using 2.00 mm CRCA sheet as per approved design and requirement, with front and rear access facility, bus bar chambers, hinged doors for all switch gear compartments, earthing the doors using 4 sq mm braided copper conductor, providing necessary cut-outs for mounting meters, relays, indication lamps, bus bar interconnection etc, detachable covers for bus bar chamber and cable alley, powder coating the assembly after subjecting to 7 tank process etc as required. CRCA sheet alone be used for the fabrication. Angles/ flats/ slotted angles etc shall not be used for the fabrication of panel assembly. The measurements should be taken the area of the complete sheets used for panel board including partitions, folding, shrouding etc. including control wiring	m ²	20.00	2654.00	Two thousand six hundred and fifty four only	53080.00
B-2	Fabrication of fully partitioned, dust and vermin proof enclosure for <i>panel assembly</i> as per form 4 of IS 8623 (with latest amendments) using 1.60 mm CRCA sheet as per approved design and requirement, with front and rear access facility, bus bar chambers, hinged doors for all switch gear compartments, earthing the doors using 4 sq mm braided copper conductor, providing necessary cut-outs for mounting meters, relays, indication lamps, bus bar interconnection etc, detachable covers for bus bar chamber and cable alley, painting the assembly with 2 coats synthetic enamel paint over a coat of zinc chromate primer etc as required. CRCA sheet alone be used for the fabrication. Angles/ flats/ slotted angles etc shall not be used for the fabrication of panel assembly. The measurements should be taken the area of the complete sheets used for panel board including partitions, folding, shrouding etc. including control wiring	M ²	30.00	2025.00	Two thousand twenty five only	60750.00
B-3	Supply and providing the following size of SMC sheets in the panel as barriers & shrouding using required bolts and nuts including cutting to shape etc., as required.					
	4 mm thick	m ²	3	4673.00	Four thousand six hundred and seventy four only	14019.00
B-4	Supply and providing the following sizes of SMC sheets as support to the extended terminations of switch gears in the outgoing side in the panel using required bolts and nuts including cutting to shape etc., as required.					
	10 mm thick	m ²	2	11394.00	Eleven thousand three hundred ninty four only	22788.00
B-5	Supply and fixing the following types of <i>beeding</i> along the periphery of doors/ other detachable compartments to make the panel assembly dust & vermin proof including sticking with glue					
a	A' section neoprene beeding suitable for 1.60/ 2.00 mm sheet	Mtrs	30.00	49.00	forty nine only	1470.00
b	U' section rubber beeding suitable for 1.60/ 2.00 mm sheet	Mtrs	40.00	7.00	seven only	280.00
B-6	Fabrication, supply, conveyance and installation of <i>base frame</i> for floor mounting type panel board using channel of class designation ISMC 75 including cutting, welding, drilling holes, painting with two coats of synthetic enamel paint over a coat of zinc chromate primer, bolting the frame to the panel and to the finished floor using required bolt and nuts, making good the damages etc. as required.	Mtrs	8.00	612.00	six hundred and twelve only	4896.00
B-7	Fabrication, supply & fixing <i>earth bus</i> system with <i>copper</i> strip/ conductor and connecting all accessories as per rule including tinning the points of contacts etc as required	Cm3	1400.00	5.70	five and seventy paise only	7980.00
B-8	Fabrication, supply & fixing main <i>bus bar system</i> and interconnections with electrolytic grade <i>copper</i> strips/ rigid conductors conforming to IS 1867 (with latest amendments) for bus bar arrangement with <i>single strip per phase</i> supported on finger type bus bar supports of adequate size, spacing between supports not exceeding 50 cm & overhang not exceeding 5 cm including bending to shape, drilling holes, tinning the points of contacts, fixing heat shrinkable PVC sleeves, plated bolts and nuts with plate washers and spring washers, copper sockets for round conductors, etc., as required.	Cm3	4500.00	6.10	six and ten paise only	27450.00
	SUPPLY AND FIXING CONTROL GEARS					
	Supply, conveyance and fixing the following types & current rated control gears & switchgears conforming to IS 13947 suitable for 440 V, 50 Hz, AC supply in the existing panel assembly as required					

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
B-9	ACB					
a	800 A, 4 pole, manual draw out type ACB with thermal magnetic release and OL & SC protection	E	2.00	119783.00	One lakh nineteen thousand seven hundred eighty three only	239566.00
B-10	ACCESSORIES FOR ACB					
a	Shunt release	E	2.00	2183.00	Two thousand one hundred eighty three only	4366.00
b	UV release with time delay of 0.2 to 3.2 sec	E	2.00	5574.00	Five thousand five hundred seventy four only	11148.00
c	630/5A - CT for 3P & 4P circuit breakers for neutral overload & ground fault protection.	E	2.00	2173.00	Two thousand one hundred seventy three only	4346.00
d	Castel key & pad lock combination	E	2.00	1992.00	One thousand nine hundred ninety two only	3984.00
B-11	MCCB WITH THERMAL MAGNETIC RELEASE					
	MCCB - 25 kA 3 pole					
a	250 A, 35 kA (Ics=100%Icu), 3 pole, current limiting type MCCB having thermal setting range of 80 - 100% with thermal magnetic release having adjustable OL & SC	E	4.00	16706.00	Sixteen thousand seven hundred six only	66824.00
b	125 A, 35 kA (Ics=100%Icu), 3 pole, current limiting type MCCB having thermal setting range of 80 - 100% with thermal magnetic release having adjustable OL & SC	E	2.00	7470.00	Seven thousand four hundred and seventy only	14940.00
B-12	SDFU					
	S & F switch disconnecter fuse unit complete with handle assembly, door inter lock and padlocking arrangement of the following ratings:					
a	400A, AC23A, TPN SDF for DIN fuse	E	2.00	10969.00	Ten thousand nine hundred sixty nine only	21938.00
b	250 A, AC 23 A, TPN SDF for DIN fuse	E	2.00	7502.00	Seven thousand five hundred and two only	15004.00
c	63 A, AC 23 A, TPN SDF for DIN fuse	E	6.00	1804.00	One thousand eight hundred and four only	10824.00
d	125 A, AC 23 A, TPN SDF for DIN fuse	E	6.00	4679.00	Four thousand six hundred and seventy nine only	28074.00
e	40 A, DIN type fuse link of size 000	E	18.00	215.00	Two hundred and fifteen only	3870.00
f	63 A, DIN type fuse link of size 000	E	12.00	215.00	Two hundred and fifteen only	2580.00
g	100 A, DIN type fuse link of size 000	E	6.00	215.00	Two hundred and fifteen only	1290.00
h	200 A, DIN type fuse link of size 0	E	6.00	460.00	four hundred and sixty only	2760.00
i	400A, DIN type fuse link of size 2	E	6.00	791.00	seven hundred and ninety one only	4746.00
B-13	PANEL MOUNTING METERS - DIGITAL TYPE					
	Multifunction meters					
	Three phase multifunction meters to read V, A and F, accuracy class 1	E	4.00	2695.00	Two thousand six hundred and ninety five only	10780.00
B-14	CURRENT TRANSFORMER					
	Tape wound metering CT					
a	400/ 5 A, 5 VA, tape wound metering CT of accuracy class 1.	E	6.00	697.00	Six hundred and ninety seven only	4182.00
b	200/ 5 A, 5 VA, tape wound metering CT of accuracy class 0.5	E	5.00	848.00	Eight hundred and forty eight only	4240.00
B-15	INDICATION LAMPS AND LEGEND PLATES					
	LED indicators and push button stations					
a	LED indicators for all voltage ranges - Blue Colour	E	15.00	238.00	Two hundred and thirty eight only	3570.00
b	LED indicators for all voltage ranges - Red, Green, Black, Yellow or Orange Colour	E	20.00	107.00	One hundred and seven only	2140.00
B-16	Legend plates					
a	Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions (both in English and Malayalam) and conventional Skull and Bone in Red colour.	E	12.00	110.00	One hundred and Ten only	1320.00
b	Aluminium anodised semi oval type legend plate with inscription of ON/ OFF/ FORWARD/ REVERSE/ START/ STOP/ UP/ DOWN/ R PHASE/ Y PHASE/ B PHASE/ TRIP/ OPEN/ CLOSE/ LEFT/ RIGHT/ MOTOR ON/ MOTOR OFF/ ACCEPT/ RETRACT/ RESET/ EMERGENCY/ EMERGENCY ON/ EMERGENCY OFF/ PUMP RUNNING/ PUMP OFF/ EMERGENCY STOP/ SLOW/ FAST or other inscriptions directed.	E	150.00	11.10	Eleven and paise ten only	1665.00
B-17	Control wiring					
	Carrying out control wiring for panel with normal meters and indication lamps alone with 650/1100 V grade PVC insulated stranded single core copper conductor cables conforming to IS 694 part I 1990 for interconnecting the control devices/ equipments including providing suitable size insulated sockets at the termination points or soldered properly, providing numbering ferrules for the proper identification of the wiring, keeping the wiring firm by suitable tie/ tie mounts/ PVC duct etc as required.					
	1.50 sq mm single run with required sockets.	m	350.00	19.50	Nineteen and paise fifty only	6825.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
B-18	APFC PANEL					
a	Fabrication of fully partitioned, dust and vermin proof enclosure for panel assembly as per form 4 of IS 8623 (with latest amendments) using 1.60 mm CRCA sheet as per approved design and requirement, with front and rear access facility, bus bar chambers, hinged doors for all switch gear compartments, earthing the doors using 4 sq mm braided copper conductor, providing necessary cut-outs for mounting meters, relays, indication lamps, bus bar interconnection etc, detachable covers for bus bar chamber and cable alley, painting the assembly with 2 coats synthetic enamel paint over a coat of zinc chromate primer etc as required. CRCA sheet alone be used for the fabrication. Angles/ flats/ slotted angles etc shall not be used for the fabrication of panel assembly. The measurements should be taken the area of the complete sheets used for panel board including partitions, folding, shrouding etc. including control wiring	M2	1.50	29593.00	Twenty nine thousand five hundred and ninety three only	44389.50
b	Three pole capacitor duty contactors for switching capacitor banks of 16 to 25 KVAR rating with AC coil.	E	3.00	2861.00	two thousand eight hundred and sixty one only	8583.00
c	Three pole capacitor duty contactors for switching capacitor banks of 7.5 to 10 KVAR rating with AC coil and 1 NO contact.	E	2.00	1707.00	One thousand seven hundred and seven only	3414.00
d	10 KVAR, 3 phase, 520 V, delta connected Double dielectric Poly Propylene Heavy duty Capacitor suitable for APFC panel with block reactor.	E	2.00	7592.00	Seven thousand five hundred and ninety two only	15184.00
e	25 KVAR, 3 phase, 520 V, delta connected Double dielectric Poly Propylene Heavy duty Capacitor suitable for APFC panel with block reactor.	E	3.00	15813.00	Fifteen thousand eight hundred and thirteen only	47439.00
B-19	8 stage, 440/ 110 V, 5 A/ 1 A intelligent power factor controller.	E	1.00	18717.00	Eighteen thousand seven hundred and seventeen only	18717.00
	Backelite fuse fittings					
	20 A, 415 V Backelite fuse fitting	E	12.00	114.00	One hundred and fourteen only	1368.00
	TOTAL OF MV SWITCH BOARDS					802790

C)LT CABLES AND TERMINATIONS

C-1	Supply, laying & clamping of Aluminium power cable 1.1 KV grade					
	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.					
a	3.5 core 240 sq mm with fabricated MS clamps (25 x 3 mm)	m	200.00	1285.00	One thousand two hundred and eighty five only	257000.00
b	3.5 core 185 sq mm with fabricated MS clamps (25 x 3 mm)	m	170.00	1025.00	One thousand and twenty five only	174250.00
c	3.5 core 70 sq mm with factory made clamp	m	800.00	481.00	Four hundred and eighty one only	384800.00
d	4 core 35 sq mm with factory made clamp	m	700.00	329.00	Three hundred and twenty nine only	230300.00
e	2 core 6 sq mm with factory made clamp	m	100.00	140.00	One hundred and forty only	14000.00
f	20 pair 0.5 mm armoured Telephone cable	Mtrs	130.00	264.00	Two hundred and sixty four only	34320.00
C-2	Supply & laying Aluminium power cable 1.1 KV grade in masonry open duct					
	Supply & laying of one No. PVC insulated and PVC sheathed armoured aluminium power cable of 1.1 KV grade of the following sizes in the existing masonry open duct as required.					
a	3.5 core 240 sq mm	m	40.00	766.00	seven hundred and sixty six only	30640.00
b	3.5 core 185 sq mm	m	30.00	607.00	Six hundred and seven only	18210.00
c	3.5 core 70 sq mm	m	60.00	299.00	Two hundred and ninety nine only	17940.00
d	4 core 35 sq mm	m	50.00	192.00	One hundred and ninety two only	9600.00
e	2 core 6 sq mm	m	100.00	125.00	One hundred and twenty five only	12500.00
C-3	Supply & laying Aluminium power cable 1.1 KV grade in additional position with sand cushioning & protective covering in ordinary rocky soil					
	Supply & laying of one number additional PVC insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade of the following sizes in ground in the same trench in one tier horizontal formation including widening the trench by 20 cm, sand cushioning up to height of 25cm, providing protective covering with country burnt bricks laid breadth wise, refilling the trench etc. as required (in ordinary rocky - soft laterite soil).					
a	4 core 35 sq mm	m	120.00	379.00	Three hundred and sevty nine only	45480.00
b	2 core 6 sq mm	m	900.00	314.00	Three hundred and fourteen only	282600.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
C-4	Supply & laying Aluminium power cable 1.1 KV grade in original position with sand cushioning & protective covering in ordinary rocky soil					
	Supply & laying of one number PVC insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade of the following sizes in ground including excavation of trench of size 35 x 75 cm, sand cushioning up to a height of 25cm (80+170mm), providing protective covering with country burnt bricks laid breadth wise, refilling the trench etc. as required (in ordinary rocky - soft laterite soil).					
a]	3.5 core 240sq:mm	m	100.00	1578.00	One thousand five hundred and seventy eight only	15780.00
b]	2core 6sq:mm	m	450.00	454.00	Four hundred and fifty four only	204300.00
c]	4core 35sq:mm	m	100.00	635.00	Six hundred and thirty five only	63500.00
C-5	END TERMINATION OF CABLES					
	Supplying siemens / tropodur type nickel plated <i>single compression brass cable gland</i> for PVC insulated and PVC sheathed armoured aluminium/ copper conductor cable 1.1 KV grade, and making end termination suitable for 2/ 3/ 3½/ 4 core cable of the following sizes as required.					
a	240 sq mm	E	8.00	518.00	Five hundred and eighteen only	4144.00
b	185 sq mm	E	6.00	376.00	Three hundred and seventy six only	2256.00
c	70 sq mm	E	32.00	234.00	Two hundred and thirty four only	7488.00
d	35 sq mm	E	30.00	169.00	One hundred and sixty nine only	5070.00
e	6 sq mm	E	26.00	90.00	Ninty only	2340.00
	TOTAL OF LT CABLE					1816518

D) POWER AND LIGHTING DISTRIBUTION WORK

D-1	Supplying and installation including all manner of supports/ suspenders, anchor bolts etc for <i>cable trays</i> made out of suitable size channel sections, slotted angles, flats, MS plates etc as required including painting with 2 coats of synthetic enamel paint over a coat of zinc chromate primer, making good the damages, colour washing etc as required.	Kg	2500.00	87.00	Eighty seven only	217500.00
D-2	Supplying and installation of <i>supports</i> , anchor bolts etc made out of suitable size <i>single section MS angle, flats etc</i> as required including painting with 2 coats of synthetic enamel paint	Kg	300.00	61.00	Sixty one only	18300.00
	SH: SUPPLY & FIXING MCB DBs & ACCESSORIES					
D-3	S & F Enclosures for MCB DB					
	Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper /brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/ isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall, making good the damages, colour washing etc. as required					
a	8 way (8+24) - three phase double cover (IP 42/43)	E	16.00	3113.00	Three thousand One hundred and thirteen only	49808.00
b	8 way (8+24) - double cover TPN vertical DB with provision for fixing 250A MCCB as incomer and SP/ TP MCB as outgoing (IP 54)	E	4.00	15235.00	Fifteen thousand two hundred and thirty five only	60940.00
D-4	S & F Mini break isolators					
	100 A four pole mini break isolator	E	16.00	911.00	Nine hundred and eleven only	14576.00
D-5	S & F RCCB					
	80 A, 4 pole, 100 mA RCCB	E	16.00	4504.00	Four thousand five hundred and four only	72064.00
D-6	S & F SP MCB					
	6 A to 32 A, 10 kA, SP MCB (B curve)	E	260.00	167.00	One hundred and sixty seven only	43420.00
D-7	S & F TP MCB					
	80 A, 10 kA, TP MCB (C curve)	E	16.00	4333.00	Four thousand three hundred and thirty three only	69328.00
D-8	MCCB - 70 kA 4 pole					
	125 A, 70 kA (Ics=100%Icu), 4 pole, current limiting type motorised MCCB having thermal setting range of 70 - 100% with thermal magnetic release having adjustable OL & SC	E	4.00	30530.00	Thirty thousand five hundred and thirty only	122120.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
D-9	Group B modular accessories - S & F Accessories					
	Supply and Fixing the following modular switches & accessories in the existing front plates and giving necessary connections as required (Group B)					
	32 A DP switch with indicator	E	27.00	287.00	Two hundred and eighty seven only	7749.00
D-10	Supply and erection metal clad combined switch socket (manufactured version only) comprising 1 No 25A 2 pin & Earth socket, with chain & plug top etc. completed & 25A SP MCB complete with interconnection and with MS bracket (with primer / enamel paint 4 coats as above) welded to structure or mounted on wall and suitable to received PVC insulated and armoured cables / wire main	Each	27.00	1840.00	One thousand eight hundred and forty only	49680.00
D-11	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.	m ²	10.00	646.00	Six hundred and forty six only	6460.00
D-12	Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969.	m ²	5.00	1113.00	One thousand one hundred and thirteen only	5565.00
D-13	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.	E	12.00	2190.00	Two thousand one hundred and ninety only	26280.00
D-14	Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.	E	24.00	133.00	One hundred and thirty three only	3192.00
D-15	Supply and erection 4.5 Kgs. CO2 fire extinguishers including fixing brackets.	Set	12.00	4800.00	Four thousand eight hundred only	57600.00
D-16	Supply and erection shock treatment charts in 3 (three) languages with wooden frame and glass top cover.	Set	1.00	800.00	Eight hundred only	800.00
D-17	First Aid Box (Supply only).	Nos	1.00	800.00	Eight hundred only	800.00
D-18	11 KV handgloves (1 pair of 2 Nos)supply only.	Pair	1.00	640.00	Six hundred and forty only	640.00
D-19	Supply and erection of hunsel make junction Boxes with hinged & screwed cover, earthing stud, 4 way connector strip, knock out on all sides for cables gland of 3Cx2.5 Sq.mm YWY cables, Junction Box should be PV C Poly carbonate size Approx. 150x150x50mm], these are cable Loop Boxes for 3Cx 2.5 sq.mm YWY cables, to be laid on trusses and tapped for highbay fittings.	Nos	60.00	800.00	Eight hundred only	48000.00
D-20	Supplying & erecting telephone krone connection box for 20 pair Telephone cables complete with krone connector of required size erected on wall.	Nos	2.00	1120.00	One thousand one hundred and twenty only	2240.00
D-21	Supplying, installing, testing and commissioning Digital type SIEMENS make type EPABX (Electronic Private Automatic Branch Exchange) of 8x16 extension as per specification.	Nos	1.00	83200.00	Eighty three thousand and two hundred only	83200.00
D-22	Supply and erection of 11 Met. Long MS Tubular Swagged pole (Bajaj Type 410 SP 49) with 300x300x10mm M.S Base Plate welded, an in built cable box having hinged cover gasket and panel locking arrangement, consisting of 4 way connector strip & S.P MCB 2 Nos Sleeves welded to pole for cable entries. The pole should be installed in ground with 450x450x1800 mm 1:3:6 cement concrete foundation, copying 450x450x500 mm size (above grouted level) including necessary excavation, reinstatement, painting with 2 coats of Red Oxide and 2 coats of Aluminium paint. The pole should have bent top portion, to support a street light fitting. Poles for Single Street Light.	Nos	37.00	41000.00	Fourty one thousand only	1517000.00
D-23	Supplying & laying (including excavation) 90mm outside dia double wall corrugated pipes (DWC) of HDPE with IS 14930 part II mark on it for cable laid under ground with necessary connecting sockets/ coupleings, tees of same materials and at required depth up to 90CM below road / ground surface, back filling with light ramming to make the road / ground surface as it was (except hitumen carpet).	Mtrs.	75.00	320.00	Three hundred and twenty only	24000.00
D-24	Supply installation of gen-2 Building Lightning arrester with details as per the requirement. Complete with protector, down conductors, gun metal tape clip, mechanical counter, stainless mast, (INGESCO make PDC 3.1 / DMSGI Make / indelect, france).	Nos.	2.00	136550.00	One lakh thirty six thousand five hundred and fifty only	273100.00
	TOTAL OF POWER & DISTRIBUTION WORK					2774362.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
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E) POINT WIRING, NETWORKING AND TELEPHONE CABLING

WIRING POINTS						
E-1	Wiring points with PVC conduit, modular box with white/ off white front plate & modular type accessories (Group B)					
	Supply and wiring points according to IS 732-1989 using rigid PVC conduit of minimum size 20 mm with specials conforming to IS 9537 part III 1983 and with suitable size specials conforming to IS 3419-1988, fixing the conduit using metal saddles spacing not exceeding 50 cm or concealed suitably and with 1.00 sq mm PVC insulated stranded single core copper conductor cable 650V grade, and continuous earthing with 1.5 Sq.mm green coloured FR PVC insulated stranded single core copper conductor cable 650V grade, generally conforming to IS 694-1990, required qty of copper earth socket, brass bolt and nut crimping/ soldering etc complete with suitable size modular type metal switch boxes, modular type front plates (white or off white) etc. up to and including 6 A modular type SP switches and making good the surface of wall, colour washing etc. complete. All the terminations in the switch boards and DB's shall be tinned and the wires shall be drawn and fixed along the periphery of the box using suitable ties, tie mounts etc as required. (Group B)					
Medium point rates						
a	Single control light point with 6A, 3 plate ceiling rose	E	90.00	697.00	Six hundred and ninty seven only	62730.00
b	Single control light point without ceiling rose	E	50.00	667.00	Six hundred and sixty seven only	33350.00
c	Twin control light point with 6A, 3 plate ceiling rose	E	20.00	1088.00	One thousand eighty eight only	21760.00
d	Call bell point with piano type 6 A bell push at one end and 6 A, 3 plate ceiling rose at other end	E	20.00	719.00	seven hundred and ninteen only	14380.00
e	Single control ceiling fan point with 6 A, 3 plate ceiling rose & with socket size stepped electronic regulator.	E	15.00	934.00	nine hundred and thirty four only	14010.00
Long point rates						
f	Single control light point with 6A, 3 plate ceiling rose	E	170.00	811.00	Eight hundred and eleven only	137870.00
g	Single control light point without ceiling rose	E	220.00	781.00	seven hundred and eighty one only	171820.00
h	Twin control light point without ceiling rose	E	20.00	1257.00	One thousand two hundred and fifty seven only	25140.00
i	Call bell point with piano type 6 A bell push at one end and 6 A, 3 plate ceiling rose at other end	E	10.00	833.00	Eight hundred and thirty three only	8330.00
j	Combined plug point with 6 A, 5 pin plug socket controlled by 6 A switch in the same switch board as that of light points.	E	15.00	516.00	Five hundred and sixteen only	7740.00
k	Single control ceiling fan point with 6 A, 3 plate ceiling rose & with socket size stepped electronic regulator.	E	140.00	1025.00	One thousand and twenty five only	143500.00
E-2	Mounting rail fittings (box type fittings) made out of CRCA sheet of minimum thickness 0.50 mm, powder coated / stove enameled suitable for 2 x 36/ 40 W FTL with light duty electronic ballast having THD < 10%, lamp holder etc., duly wired up for use on 240 V single phase AC supply.	E	30.00	1411.00	One thousand four hundred and eleven only	42330.00
E-3	Supply and laying heavy gauge PVC conduit conforming to IS 9537/1983 Part III in roof slab, jointing the pipes with PVC solvent cement, tying & fixing the conduit firmly with the re-inforcement etc. as required.					
a	20 mm	m	1200.00	41.00	forty one only	49200.00
b	20 mm two way through junction box	E	25.00	42.00	forty two only	1050.00
E-4	Supplying and erecting computer point of networking with face plate , Box 1/o jack , Rj-45 pin complete erected on wall / table / partisan complete with testing.	Nos	75.00	520.00	Five hundred and twenty only	39000.00
E-5	Supplying & Drawing unarmored PVC insulated and & PVC sheathed copper conductor Telephone Pair Cable conforming to ITD specification for indoor application through the existing conduit					
	10 Pair	m	1500.00	64.00	Sixty four only	96000.00
E-6	Supplying & erecting 16/20/25A starter (modular range)2 module for AC unit on provided box complete and duly concealed with necessary material and connected.	Nos	27.00	744.00	Seven hundred and forty four only	20088.00
E-7	Supplying & erecting modular type switch 6A/10A ISI mark approved make duly erected on provided plate and box with wiring connections complete.	Pnts	115.00	280.00	Two hundred and eighty only	32200.00
E-8	Supplying and erecting modular type 3 pin 6A socket ISI mark approved make duly erected on provided plate and box with wiring connections complete.	Pnts	115.00	304.00	Three hundred and four only	34960.00
E-9	Supply and erecting modular type 3 Pin 6/16A combined unit ISI mark approved make duly erected on provided plate and box with wiring connections complete.	Nos	45.00	376.00	Three hundred and seventy six only	16920.00
E-10	Supply and erecting modular type switch one way 16/20A ISI mark approved make duly erected on provided plate and box with wiring connections complete with neon Indicator.	Nos	45.00	416.00	Four hundred and sixteen only	18720.00
E-11	Supplying and erecting PVC surface modular switch box with double mounting plate for 3 module duly erected in an approved manner.	Pnts	40.00	192.00	One hundred and ninty two only	7680.00
E-12	Supplying and laying PVC (casing -N- capping) of size 25 mm , with accessories on wall / ceiling.	Mtrs	1899.00	64.00	Sixty four only	121536.00
E-13	Supply and fixing the following sizes of PVC Conduit conforming to IS 9537 / 1983 part III along with all required accessories on surface including making good the damages etc as required.					
a]	20mm dia medium guage	Mtrs	500.00	63.00	Sixty three only	31500.00
b]	25mm dia medium guage	Mtrs	300.00	73.00	seventy three only	21900.00
c]	32mm dia medium guage	Mtrs	500.00	98.00	Ninty eight only	49000.00
d]	40mm dia medium guage	Mtrs	100.00	139.00	One hundred and thirty nine only	13900.00
E14]	Supply and fixing the following sizes of PVC Conduit conforming to IS 9537 / 1983 part III along with all required accessories in recess including cutting the wall and making good the damages etc as required.					
a]	20mm dia medium guage	Mtrs	5500.00	87.00	Eighty seven only	478500.00
b]	25mm dia medium guage	Mtrs	1500.00	97.00	Ninty seven only	145500.00
c]	32mm dia medium guage	Mtrs	1500.00	124.00	One hundred and twenty four only	186000.00
d]	40mm dia medium guage	mts	500.00	166.00	one hundred and sixty six only	83000.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
E-15	Supply and drawing 650/1100 V grade PVC insulated stranded single core copper conductor cables conforming to IS 694 part I 1990 in the existing surface / recess conduit as required including giving necessary connections of the following sizes.					
a]	1.50 sq mm 2 run	Mtrs	3000.00	55.00	Fifty five only	165000.00
b	1.50 sq mm 4 run	Mtrs	2500.00	87.00	Eighty seven only	217500.00
c	1.5sq:mm 6run	Mtrs	1000.00	118.00	One hundred and eighteen only	118000.00
d]	1.50 sq mm 8 run	Mtrs	800.00	149.00	One hundred and forty nine only	119200.00
e]	2.5sq:mm 2run	Mtrs	600.00	74.00	seventy four only	44400.00
f]	2.5sq:mm 4run	mtrs	300.00	123.00	One hundred and twenty three only	36900.00
g]	4sq:mm2run	Mtrs	1000.00	69.00	Sixty nine only	69000.00
h]	4sq:mm4run	Mtrs	800.00	172.00	One hundred and seventy two only	137600.00
i]	4sq:mm6run	Mtrs	700.00	246.00	Two hundred and fourty six only	172200.00
j]	4sq:mm 8run	Mts	600.00	320.00	Three hundred and twenty only	192000.00
k]	6sq:mm 4run	mts	200.00	255.00	Two hundred and fifty five only	51000.00
l]	16sq:mm 4run	mts	200.00	653.00	six hundred and fifty three only	130600.00
m]	25sq:mm 4run	mts	200.00	1001.00	One thousand and one only	200200.00
n]	1x2 mm bare copper Earth wire of 14 SWG.	Mtrs	2700.00	40.00	Forty only	108000.00
o]	1x2.6 mm bare copper Earth wire of 12 SWG	Mtrs	1000.00	56.00	Fifty six only	56000.00
p]	1x3.15 mm bare copper Earth wire of 10 SWG.	Mtrs	2000.00	80.00	Eighty only	160000.00
q]	1x 4mm bare copper Earth wire of 08 SWG.	Mtrs	2000.00	112.00	One hundred and twelve only	224000.00
r]	Supplying & erecting RG -59 TV Co-axial cable in already provided PVC conduit pipe / in place and concealed in wall.	Mtrs	500.00	40.00	Forty only	20000.00
s]	Supplying & erecting Telephone wire in already provided PVC conduit pipe in place and concealed in wall.					
t]	Telephone wire 2 pair & 0.6mm.	Mtrs	900.00	30.00	Thirty only	27000.00
u]	Telephone wire 4 Pair & 0.6mm.	Mtrs	500.00	40.00	Forty only	20000.00
vi]	Telephone wire 5 Pair & 0.6mm .	Mtrs	200.00	56.00	Fifty six only	11200.00
E-16	Supplying & drawinging CAT-6 cable in already provided PVC conduit pipe in place and concealed in wall.	Sets	1500.00	64.00	Sixty four only	96000.00
E-17	Supplying , installation , testing and commissioning of digital inverter of reputed make 800 VA single phase 230 Volt complete with over load relay and necessary protections , with battery of 12 volt -2X150 AH Exide make maintenance free (Three Hour Back Up), with battery terminals wire and necessary copper wire , with plug and socket top connected to load up to 750 watt with required accessories.	Sets	1.00	40000.00	Fourty thousand only	40000.00
E-18	Supply and fixing the following types of superior quality 250V A.C call bell on existing M.S. box and giving connections with required length of 3 core, 16 / 0.20mm 650/1100V grade PVC insulated and PVC sheathed round copper conductor flex wire conforming to relevant ISS or with the extended original wiring, earthing the MS box and making good the surface as required.					
a	Buzzer	E	10.00	60.00	Sixty only	600.00
b	Call bell	E	5.00	70.00	Seventy only	350.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
E-19	SH: S& F CABLE MANAGEMENT SYSTEM					
	PVC Cable management system - 50 x 50 mm & 100 x 50 mm					
	Supply and fixing 100 x 50 mm PVC Cable Management System with base and lid along with the following accessories conforming to IEC 61084/ BS 476 & 4678 on surface / recess including cutting the wall and making good the damages in case of recessed installation as required.					
a	100 x 50 mm CMS with base & lid	m	200.00	623.00	six hundred and twenty three only	124600.00
b	Cable divider	E	400.00	78.00	Seventy eight only	31200.00
c	External Angle 90°	E	35.00	100.00	One hundred only	3500.00
d	Flat Angle 90°	E	40.00	90.00	Ninty only	3600.00
e	Internal Angle 90°	E	35.00	91.00	Ninty one only	3185.00
f	Internal Coupler	E	35.00	56.00	Fifty six only	1960.00
g	Flat cross	E	20.00	302.00	Three hundred and two only	6040.00
h	End Cap	E	10.00	65.50	sixty five and paise fifty only	655.00
i	Flanged Coupler	E	20.00	124.00	One hundred and twenty four only	2480.00
j	Joint cover	E	20.00	68.50	sixty eight and paise fifty only	1370.00
k	Special Internal angle 45°	E	15.00	302.00	Three hundred and two only	4530.00
l	Special External angle 45°	E	15.00	208.00	Two hundred and eight only	3120.00
m	Special Flat angle 45°	E	15.00	208.00	Two hundred and eight only	3120.00
n	External Tee	E	7.00	302.00	Three hundred and two only	2114.00
o	Flat Tee	E	7.00	83.00	Eighty three only	581.00
p	Internal Tee	E	5.00	302.00	Three hundred and two only	1510.00
q	Cable Retainer	E	50.00	31.00	Thirty one only	1550.00
r	1 to 3 module mounting box	E	25.00	101.00	One hundred and one only	2525.00
s	4 to 5 module mounting box	E	25.00	116.00	One hundred and sixteen only	2900.00
t	8 module mounting box	E	25.00	158.00	One hundred and fifty eight only	3950.00
u	10 module mounting box	E	25.00	201.00	Two hundred and one only	5025.00
v	Spacer box	E	5.00	27.50	Twenty seven and paise fifty only	137.50
w	3 / 5 module under box divider	E	5.00	27.50	Twenty seven and paise fifty only	137.50
x	Wall plate for internal angle	E	5.00	62.50	Sixty two and paise fifty only	312.50
y	Mini Trunking adapter	E	7.00	30.50	Thirty and paise fifty only	213.50
z	MCB/RCD Housing	E	7.00	220.00	Two hundred and twenty only	1540.00
za	Reducer 100 x 50 to 50 x 50 mm	E	12.00	173.00	One hundred and seventy three only	2076.00
	TOTAL OF POINT WIRING, NETWORKING AND TELEPHONE CABLING					4760296.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
F) FITTINGS						
F	Supply and Erection Light fittings & Fans -Supply erection rate quoted shall be deemed to include all necessary fixing hardwares, suspension brackets PVC flexible conduit 3Cx 1.5 sq.mm. copper conductor PVC insulated & PVC sheathed lead wire from ceiling rose / cable looping box. to the fitting , consumables etc.					
	The rate quoted shall include all above and testing, commissioning of fitting.					
F-1	Supplying and erecting luminous type call bell indicator with plastic body , heavy duty coil and indicator lamp working on 230 V AC supply with resetting arrangement complete erected on double wooden / sunmica board.	Each	5.00	520.00	Five hundred and twenty only	2600.00
F-2	Supply & installation of fluorescent fittings on TW round block					
	Supply, conveyance installation testing and commissioning of pre-wired fluorescent fittings of the following types complete with all accessories and fluorescent lamps etc. directly on wall or ceiling with <i>T.W round block</i> neatly painted to suit the fitting and giving connection with required length of 16/0.20mm 3 core copper conductor flex wire conforming to relevant ISS and giving connections as required.					
	Fluorescent tube light fitting with lamp holder, APF electronic ballast suitable for continuous operation with THD <10%, power factor >0.98, RoHS compliant, duly wired up for use on 230 V AC supply . The fittings shall be made from CRCA MS sheet of minimum thickness 0.50 mm nominal thickness inside & outside.					
a	Suitable for single 28 W T5 lamp	E	85.00	1426.00	One thousand four hundred and twenty six only	121210.00
b	Suitable for twin 28 W T5 lamps	E	320.00	2039.00	Two thousand and thirty nine only	652480.00
F-3	Supply, conveyance, installation, testing and commissioning wall mounting fan of the following sizes using mounting brackets supplied along with the fan and giving connection with existing wire.					
	400 mm sweep	E	12.00	1693.00	One thousand Six hundred and ninty three only	20316.00
F-4	Supply, conveyance, installation, testing and commissioning of ceiling fans of the following sizes using standard accessories including resistance type regulator, wiring the down rod with 16/0.20mm PVC insulated and PVC sheathed 650/1100V grade 3 core round copper conductor flex wire or with extended original wiring etc. as required.					
a	1200 mm sweep (Category A)	E	15.00	1285.00	One thousand two hundred and eighty five only	19275.00
b	1400 mm sweep (Category A)	E	185.00	1370.00	One thousand three hundred and seventy only	253450.00
F-5	supplying and erecting approved make recessed down lighter with mirror optics suitable for 2x18 W compact flou. Lamp fixed in false ceiling . (Similar to philips FBH 150/218)	Each	34.00	1760.00	One thousand seven hundred and sixty only	59840.00
F-6	supplying and erecting approved make recessed down lighter with mirror optics suitable for 1x18 W compact flou. Lamp fixed in false ceiling . (Similar to philips FBH 150/118)	Each	9.00	1280.00	One thousand two hundred and eighty only	11520.00
F-7	Supplying and erecting circular type ceiling lighter suitable for CFL 2 x18 watts including gear box , fixed in ceiling. Decorative type (similar to philips WW BCS 1901)	Nos	10.00	1440.00	One thousand four hundred and forty only	14400.00

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
F-8	Supplying and erecting luminaries suitable for 11 watt CFL Lamp , fixed on wall above mirror (Similar to Philips FMS 200/111)	Nos	8.00	840.00	Eight hundred and forty only	6720.00
F-9	Supplying & erecting compact fluo. Lamp 11W , 230 V to be used with provided ballast.	Nos	8.00	640.00	Six hundred and forty only	5120.00
F-10	Supplying & erecting compact fluo.lamp 18 W, 230V to be used with provided ballast.	Nos	97.00	1400.00	One thousand four hundred only	135800.0
F-11	Supplying & erecting 4x14 watt mirror optic fitting , false ceiling mounted with 14 watt 4 nos tube lights, GETC 4x24 MO MLC R 300 HF.	Nos	23.00	6720.00	Six Thousand seven hundred and twenty only	154560.0
F-12	<i>Charges for cutting holes suitable for accommodating exhaust fans of sizes exceeding 305 mm sweep up to 450 mm including plastering, colour washing etc. as required.</i>	E	5.00	265.00	Two hundred and sixty five only	1325.0
F-13	Supplying & erecting 'B' grade G.I pipe / M.S pipe down rod duly painted for fan complete erected with PVC two core flexible cable 24/0.2 mm copper PVC wire.	Mtrs	280.00	160.00	One hundred and sixty only	44800.00
F-14	Supplying and erecting exhaust fan medium duty 230 V.A.C.50 cycles 225 mm , 1400 RPM condensor complete erected in position with necessary materials . Fan motor with moisture proof treatment and E class insulation.	Each	24.00	1760.00	One thousand seven hundred and sixty only	42240.00
F-15	Supplying fixing heavy duty exhaust fan of of 600mm(24"),700 RPM suitable for 230 V single phase AC supply at the top of the stadium i/c arranging necessary scaffoldings, making connections testing etc as required.	Each	45.00	12533.00	Twelve thousand five hundred and thirty three only	563985.00
F-16	Providing recess in brick wall suitable for erection of exhaust fan up to 450 mm, sweep complete with grouting of nut, bolts, plastering and colour washing to match the colour of the wall for the wall thickness of 225 mm.	Each	69.00	560.00	Five hundred and sixty only	38640.00
F-17	Supplying and erecting metal sheet CAWL , sector shape with radius more than the size of exhaust fan 40 cms . Size made from 22 gauge G.I sheet on 40x40x4 mm . Angle iron frame and 25x3 mm flat on other side with expanded metal mesh to avoid birds entry and with strengthening angles iron of 25x25x3 mm on top side complete welded and painted with one coat of red oxide and 2 coats enamel paint to match the colour of back ground duly erected with four Nos.9 33 x100mm nut bolts grouted in wall complete erected in an approved manner with necessary colour washing	Each	45.00	960.00	Nine hundred and sixty only	43200.00
F-18	Supplying & erecting 150 W,M,H Flood light fittings with lamp to be mounted on pole 1.5 mtr height GI pipe pole , for building illumination (Bajaj).	Nos	4.00	6400.00	Six Thousand four hundred only	25600.00
F-19	Supply & Erection of 250W M.H street Light Fitting with Lamp to be mounted on 11 Mtr . High Street light Pole , at mounting height of about 9 Mtrs. [Similar To Philips SGP 325].	Nos	37.00	10400.00	Ten Thousand four hundred only	384800.00
F-20	Supplying & erecting gate light fitting with 300 mm . Dia. Clear acrylic bowl/ mushroom / round shape with bollard suitable for 2x18 watt CFL lamp on provided pipe [Similar To Cromption CFPT 18].	Nos	4.00	3600.00	Three thousand six hundred only	14400.00
F-21	S/F 18 " wall mounted heavy duty air circulator including testing, commissioning etc as reqd	Nos	32.00	6500.00	Six thousand five hundred only	208000.00
	TOTAL OF FITTINGS					2824281

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
2. FIRE FIGHTING.						
A	FIRE HYDRANT SYSTEM					
1	Supplying , Laying and jointing in position 'C' class G.I. Pipes (E.R.W.Quality) conforming to IS 1239 with welded / flanged joints included cutting the pipes to correct length, providing and welding M.S. flanges. Providing epoxy coating to welded surface testing to 15 kgs/cm2 pressure, including painting the pipes with bituminous paint and wrapping the pipes with plastic film tape all complete including all excavations in any type of soil, refilling the trenches after testing disposing of surplus material dewatering etc. complete all as per directions for the following diameters.					
a)	150 mm dia-	Rmt	450.00	2000	Two thousand only	900000
b)	80 mm dia-	Rmt	75.00	1100	One thousand and one hundred only	82500
2	Supplying, Laying and jointing in position 'C' class G.I Pipes (ERW Quality) conforming to IS 1239 with welded / flanged joints to correct alignment including all fitting including cutting the pipes in correct length, providing & welding G.I. Flanges, jointing by means of arc welding, fixing against wall with heavy M.S. brackers /hangers, of appropriate design making flanged.joints by providing necessary G.I. Nuts, bolts,gaskets, fasteners, testing to 15kgs/cm2 pressure, including painting the pipes with coat of Zinc Chromate primer and 2 coats of enamel paint making holes in concrete or block work and reinstating the surface etc. complete as directed for the following diameters including fittings (Within Fire Ducts or on walls / ceiling).					
a)	150 mm dia-	Rmt	250.00	1900	One thousand and nine hundred only	475000
b)	100 mm dia-	Rmt	15.00	1700	One thousand and seven hundred only	25500
c)	80 mm dia	Rmt	12.00	1000	One thousand only	12000
3	Supplying & Fixing fire hydrants as per IS 5290, consisting of 63 mm. dia, single outlet flanged oblique type hydrant valve with instantaneous female plunger type coupling, chained blank cap including making flanged joints by providing necessary nuts, bolts, gaskets (6 mm thick neoprene) all complete as suitable for 80 mm. dia stand post.	Nos	14.00	7500	Seven thousand five hundred only	105000
4	Supplying & installing in position 2 lengths of 15 mtr long and 63 mm. dia, controlled, RRL lined canvass hose reels along with couplings, branch pipes and nozzles in a metal box with lockable glass doors and applying one coat of dichromate primer paint and 2 coats of enamel paint in post office red and fixing the same at ground level at suitable location so as to be easily seen and accessible etc. complete Size750mmx 600mm.	Nos	14.00	12000	Twelve thousand only	168000
5	Supply & Fixing Fire inlet Siamese connection fabricated from 150 mm. G.I. Pipe with 4 nos 63 mm dia G.M. male hydrant connection including providing and fixing 150 mm dia Butterfly valve, non return valve etc. for the wet riser, etc. complete.	No	1.00	17000	Seventeen thousand only	17000
6	Supplying & Fixing 9 litres capacity and buckets with initial sand fill including painting providing necessary brackets / clamps. proper supports as required including providing and fixing stands fabricated out of M.S. section suitable for sand buckets etc. complete as directed by the Engineer-in-charge.	Nos	8.00	250	Two hundred and fifty only	2000
7	Supplying & Fixing portable fire extinguishers (dry chemical powder) suitable for wall mounting including fixing the same with necessary brackets / clamps / anchor bolts drilling holes making good the same painting the surface as required as per direction of the Engineer-in-charge.					
a)	5 kg capacity-	Nos	7.00	2500	Two thousand five hundred only	17500
8	DO AS ABOVE BUT FOR CO2, TYPE Extinguishers.					
a)	4.5 kg -	Nos	20.00	5000	Five thousand only	100000
9	Supplying & Fixing of Suitable C.I. Air release valve of 25 mm dia. and G.I. Drain pipe of required length including necessary support and painting with two coats of enamel paint over a coat of primer etc. complete, for wet riser termination.	Nos	2.00	1300	One thousand three hundred only	2600
10	Supplying & Fixing of Suitable G.M. Drain valve of 25 mm dia and G.I. Drain pipe of required length including necessary support and painting with two coats of enamel paint of approved colour over a priming coat etc completion the lower end of the wet riser.	Nos	4.00	950	nine hundred and fifty only	3800

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
11	Supplying & Fixing in position cast iron butterfly valve (AUDCO) standard pattern (Horizontal / Vertical) including necessary flanged joints by providing necessary nuts, bolts gaskets, etc. all complete of the following diameters					
a)	150 mm dia	Nos	7.00	7000	Seven thousand only	49000
b)	100 mm dia.	Nos	2.00	5000	Five thousand only	10000
12	Supplying & Fixing heavy approved quality cast iron Wafer type non return valves including making joints etc all complete for the following diameters.					
a)	150 mm dia.	Nos	7.00	4000	Four thousand only	28000
b)	100 mm dia.	Nos	2.00	3500	Three thousand five hundred only	7000
c)	80 mm dia.	Nos	2.00	3000	Three thousand only	6000
13	Supplying & Fixing foot valve with strainer					
a)	150 mm dia.	Nos	2.00	5000	Five thousand only	10000
b)	80 mm dia.	Nos	1.00	3500	Three thousand five hundred only	3500
14	MAIN PUMPS :					
	Supply , Erection & commissioning of back pull out type centrifugal pump having cast iron casing, bronze impeller hand finished and dynamically balanced EN 8 high tensile steel shaft running in double ball bearing Each pump should be coupled on an MS fabricated base plate to a Suitable HP 2900 RPM, 415 Volts , 50 Cycles, AC 3 Phase TEFC motor in IP 55 Enclosure.					
a)	2280LPM at 70 m head (Hydrant Pump) 60HP	Nos	1.00	180000	One lakh eighty thousand only	180000
15	DIESEL ENGINE DRIVEN FIRE PUMP					
	Supply, installation , testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following complete as required.					
	a) Horizontal type, multistage centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 Kg/Cm at highest and farthest outlet at specified outlet at specified flow of delivery of 2280 Litres/min against a total head of 64 mtr confirming to IS1520(Kirloskar DSM-100/36 , Crompton or similar superior make)					
	b) Water cooled diesel engine developing not less than 72 HP , 1500 RPM and suitable for the above pumps Confirming to relevant and latest BS&IS standards complete with auto starting mechanism, 24 V electric starting equipment, Diesel tank, exhaust pipe extended up to 1m out side the pump house duly insulated with 50mm thick glass wool with 1.0mm thick aluminium sheet cladding residential silencer , instruments and protection for LLOP, High water temperature and high speed, stop solenoid for autostop in the event of fault with audio indications, 12V 2nos 180 AH battery with stand , fuel tank of suitable capacity for filling fuel for 12 hrs running with necessary Angle iron supports , fuel piping from fuel tank to Engine and over flow return lines with necessary valves etc ,required number of AVM pads, painted with post office red colour etc as reqd. (Kirloskar/ KOEL/ Ashok Leyland / Cummins)					
	c) MS fabricated common base plate , coupling, coupling guard, foundation bolts etc as required					
	d) Supplying and filling 200 litres of diesel with barrel with hand pump and flexible pipe of 5 mtrs length.					
	e) Suitable cement concrete foundation duly plastered with angle iron nozing on top and all four corners.					
	complete as above	Job	1	674670	Six lakh seventy four thousand six hundred and seventy only	674670
16	Jockey Pump					
	Supply , Erection & commissioning of Horizontal self priming jockey pump having cast iron casing, cast iron diffusers, bronze impellers EN 8 High tensile steel shaft running in double ball bearing Each pump should be coupled on an MS fabricated base plate to a suitable HP 2900 RPM, 415 Volts , 50 Cy, 3 Ph.					
	180 LPM at 70 m head.	Nos	1.00	40000	Fourty thousand only	40000
17	Terrace Level Booster Pump -					
	Supply , Erection & commissioning of Fixing horizontal monoblock centrifugal Booster pump having cast iron casing, bronze Impeller EN 8 shaft driven by 12.5 HP, 2900 rpm Motor capacity 900 LPM at 35 mtrs head from all causes. pumps to be on auto control.	Nos	1.00	35000	Thirty five thousand only	35000

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
18	PANEL FOR TERRACE PUMP					
	Fabrication, Supply ,installation testing and commissioning of electrical control panel of cubical construction,wall mounted type , fabricated out of 2 mm thick CRCA sheet , compartmentalized with hinged lockable doors, dust and vermin proof ,powder coated with approved shade after 7 tank treatment, cable alloy ,inter connection, having switch gears and accessories mounting and internal wiring, earth terminals, numbering etc complete in all respect ,suitable for operation on 415 V , 3 phase , 50 HZ ac supply with enclosure protection class IP 42 as required.					
	i) 63 A TPN SDFU with 40 A HRC fuses					
	ii) 1No.0-500V voltmeter with selector switch					
	iii) 1No. 0-30A Ammeter with selector switch & selector switch					
	iv) LED type R Y B indicators with control fuse one set					
	v) Automatic start delay starter suitable for 12.5 HP electric driven pump with over load protection, current sensing type single phasing preventor complete with all accessories and internal wiring required for automatic operation and provision for remote operation and extending status of pump set					
	vi) Selector switch for local/remote ,auto/manual/off operation ON/OFF indication lamp etc.					
	Complete as above	Job	1	12810	Twelve thousand eight hundred and ten only	12810
19	Providing and installing 200 Lit diaphragm tank with pressure switch etc. complete for auto operation of Hydrant pump including all necessary connection and drain piping.	Nos	1.00	13000	Thirteen thousand only	13000
20	Supplying & Fixing pressure gauge, glycerin Filled with isolation valve.	Nos	4.00	1200	One thousand two hundred only	4800
21	Providing & Laying 1.1 KV grade. ISI mark PVC sheathed aluminum Conductor , armoured cables of following sizes for					
	a) The main pump - 3 c x 50 mm sq	Rmt	28.00	350	Three hundred and fifty only	9800
	b) The jockey Pump - 3 c x 10 mm sq.	Rmt	8.00	180	One hundred and eighty only	1440
	c) The Booster Pump - 3 c x 10 mm sq.	Rmt	40.00	180	One hundred and eighty only	7200
22	MAIN FIRE PUMP CONTROL PANEL					
	Fabrication, Supply ,installation testing and commissioning of electrical control panel of cubical construction,wall mounted type , fabricated out of 2 mm thick CRCA sheet , compartmentalized with hinged lockable doors, dust and vermin proof ,powder coated with approved shade after 7 tank treatment, cable alloy ,inter connection, having switch gears and accessories mounting and internal wiring, earth terminals, numbering etc complete in all respect ,suitable for operation on 415 V , 3 phase , 50 HZ ac supply , with necessary base channel etc with enclosure protection class IP 42 as required.					
	I) INCOMER SECTION					
	The incomer section shall comprise:					
	i) 1No.250 A TPN SDFU with HRC fuses					
	ii) 1No.0-500V voltmeter with selector switch					
	iii) 1No. 0-250A Ammeter with selector switch & CTs etc.					
	iv) LED type R Y B indicators with control fuses & toggle switches- one set					
	ii) 1 set of 4 strips, 415V Aluminum bus bar of 400 Amps capacity of suitable length with insulators..					

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
	II) OUT GOINGS					
	a) 1 No 63 TPN SDFU with HRC fuses [For Terrace Pump]					
	b) 1 No 63 TPN SDFU with 20 A HRC fuses -1 No [For Battery charger]					
	c) Electric Fire Pump Section					
	i) 200 A TPN SDFU with 125 A HRC fuses with Fully Automatic star delta starter suitable for 60 BHP electric driven pump with over load protection, current sensing type single phasing preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto manual/OFF operation (Make Seimens /L&T/ EE/ similar superior make)					
	d) Jockey Pump Section:-					
	i) 63 A TP&N SDFU with 40 A HRC fuses Fully Automatic star delta starter suitable for 12.5 BHP electric driven pump with over load protection, current sensing type single phasing preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto manual/OFF operation with out any under voltage/no volt trip (Make Seimens /L&T/ EE/ similar superior make)					
	e) Diesel Engine Fire pump Section:-					
	Control for Diesel engine comprising the following.					
	i) Auto/manual selector switch & 3 attempt starting device, timers and relays as required , push buttons start/stop in manual mode.					
	ii) Indiction lamp for LLOP, high water temperature and Engine ON Indication.					
	iii) Battery charger suitable for 12/24 V DC with boost and trickle selector switch 0 – 30 V DC voltmeter and 0 – 20 A DC ammeter					
	iv) All standard relays and accessories for automatic operation of diesel Engine.					
	f) General					
	i) Visual indication/audio alarm hooter of suitable range.					
	ii) Earthing Two earth bars of 25x5mm GI strip shall run at the rear of the board binding all sections, two suitable earth studs shall also be provided on the panel for terminating earth strip or wire from main earth stations. All the hinged door shall earthed with suitable size pvc sheathed copper conductor wire etc as reqd.					
	iii) Pressure switches 3Nos. (for fire pumps & pressurization pump)					
	iv) Water level indicator & switch to prevent dry running of fire pump i/c audio & visual alarm.					
	v) Status selector switch of each of the pumps for automatic as well as manual operation as reqd.					
	vi) Pumps when under manual status shall be operated through relevant push buttons as reqd.					
	vii) Lock out indication for Electric fire pump as well as audio alarm with silencing facility as reqd.					
	xi) Lock out indication for diesel fire pump as well as audio alarm with silencing facility as reqd.					
	xii) Manual resetting push button for return to normal operation of locked out unit as reqd.					
	xiii) Terminal facility for repeat indications of various audio & visual indications.					
	Note:1) All the Control cable from pressure switches/ relays etc to control panel, from control panel to Diesel Engine for automatic starting/annunciation of status/defect, from battery charger to Battery, etc are included in the scope of work.					
	Note: 2) The pressurisation Pump will start on sudden pressure loss and only in case main Electric pump fails to start. No other pump will be working when diesel engine fire pump is in operation. Audio visual alarm should be provided to indicate failure of main electric fire pump. If within preset time, the standby pump also fails to develop pressure, this pump shall be shut down and locked out. The terrace pump will start on sudden loss of pressure only when both the fire pumps have either failed to start or exhausted water.					
	Complete as above	Job	1	275003	Two lakh seventy five thousand and three only	275003

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
23	INDICATION PANEL IN FIRE CONTROL ROOM.					
	Fabrication, supply , installation , testing & commissioning of wall mounted remote indication panel for fire fighting system fabricated from not less than 1.6 Mm Thick CRCA sheet , powder coated of approved shade complete internal wiring , indicating lamps , relays, accessories , numbering, lettering complete on all respect and consisting of following as required.					
	(a) ON/OFF indication of main electrical fire pump, pressurisation pump, terrace pump.					
	(b) Audio/Visual indication of operation of main/ Diesel fire pump and terrace pump with reset push button.					
	(c) Pressure indication in fire fighting system (pressure transducer to be installed under separate item)					
	Complete as above	Job	1	23019	twenty three thousand and nineteen only	23019
B)	WATER PUMP SET FOR FILLING TERRACE TANK.					
1	Supplying , installation , testing and commissioning of single stage horizontal centrifugal type monoblock pump set with Cast Iron impellor and carbon steel shaft , having pumping capacity of 4.1LPS at a total head of 36 meter , designed for 2" dia suction and 1 1/2 " dia discharge lines and driven by 5 HP electric motor suitable for 3 phase, 415 V, 50 Hz AC supply , including providing and fixing suitable cement concrete foundation with suitable size of MS angle iron nozing on top and all four sides etc as required. (Kirloskar- KDS 550++ model or similar superior make)	Job	1	30000	Thirty thousand only	30000
	PANEL FOR WATER PUMP SET					
2	Fabrication, Supply ,installation testing and commissioning of electrical control panel of cubical construction, wall mounted type , fabricated out of 2 mm thick CRCA sheet , compartmentalized with hinged lockable doors, dust and vermin proof , powder coated with approved shade after 7 tank treatment, cable alley ,inter connection, having switch gears and accessories mounting and internal wiring, earth terminals, numbering etc complete in all respect ,suitable for operation on 415 V , 3 phase , 50 HZ ac supply with enclosure protection class IP 42 as required.					
	a) Incomer					
	i) 1No 63 A TPN SDFU with 63 A HRC Fuses					
	ii) 1No.0-500V voltmeter with selector switch					
	iii) 1No. 0-30A Ammeter with selector switch and CTs					
	iv) 1 set of 4 strips, 415V Aluminum bus bar of 100 Amps capacity of suitable length.					
	v) LED type R Y B indicators with control fuse one set					
	c) Out Going.					
	i) 1No 32 A TPN SDFU with 25 A HRC fuses [For filling Terrace Tank]					
	ii) 1No 32 A TPN SDFU with 20 A HRC fuses [Pump room Lighting & For Pump for Filling Priming Tank]					
	iii) 1No 32 A TPN SDFU with 20 A HRC fuses [Spare]					
	iv) DOL starter suitable for 5Hp electric driven pump with overload protection, current sensing type single phasing preventor complete with all accessories Push button for ON/OFF etc as required (Make Seimens /L&T/ EE/ similar superior make)					
	v) 1No 6 A AC-3 rating 3 pole contactor with water level sensing device and probes(to be connected to priming tank) for automatic operation of pump set with necessary internal wiring and wiring from control panel to priming tank .					
	vi) 6 A SP MCB[B Series]-2 Nos					
	vii) 6 A SP- MCB[C Series]-1 No					
	Complete as above	Job	1	39822	Thirty nine thousand eight hundred and twenty two only	39822
3	Supplying and laying of 'C' class GI pipes conforming to IS 1239-1976 i/c fittings like bends 'T' sections elbows gaskets etc but excluding valves, gauges of following sizes etc as reqd in the following conditions (Make TATA, Jindal , Zenith)					

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
a	On wall/floor or on free standing with suitable brackets/ in existing trench with suitable platform or brick blocks including angle iron edges in supports etc. and fixing the pipe with suitable iron strip, clamps, brackets etc as reqd.					
	i)200mm	mtrs	20	3222	Three thousand two hundred and twenty two only	64440
	ii)50mm	mtrs	30	743	Seven hundred and forty three only	22290
	iii) 40 mm	mtrs	200	559	Five hundred and fifty nine only	111800
4	Supplying and fixing of the following valves & gauges as per specifications of following types (ISI marked)					
	i) 50 mm sluice valve with GM body	Nos	5	2845	Two thousand eight hundred and forty five only	14225
	ii) 40 mm sluice valve with GM body	Nos	4	1997	One thousand nine hundred and ninety seven only	7988
	iii)50 mm dia Non return valve with GM body	Nos	1	1948	One thousand nine hundred and forty eight only	1948
	iv)40 mm dia Non return valve with GM body	Nos	2	1350	One thousand three hundred and fifty only	2700
	v)200mm dia foot valve with strainer with CI / GM body	Nos	2	1350	One thousand three hundred and fifty only	2700
	vi)100mm dia foot valve with strainer with CI/GM body	Nos	2	4200	Four thousand two hundred only	8400
5	Supplying and fixing of the following valves & gauges as per specifications of following types					
	i)50mm dia foot valve with strainer with CI/GM body	Nos	2	811	Eight hundred and eleven only	1622
	PUMP SET FOR FILLING PRIMING TANK					
6	Supplying , installation , testing and commissioning of single stage horizontal centrifugal type monoblock pump set with Cast Iron impellor and carbon steel shaft , having pumping capacity of 0.94 LPS LPS at a total head of 10 meter , designed for 2" dia suction and 1 1/2 " dia discharge lines and driven by 1 HP electric motor suitable for single phase, 210V, 50 Hz AC supply , including providing and fixing suitable cement concrete foundation with suitable size of MS angle iron nozing on top and all four sides etc as required. (Kirloskar- KDS 0510 Model or similar superior make)	No	1	12810	Twelve thousand eight hundred and ten only	12810
7	S/F first aid hose reel equipments comprising hose reel, guide, hose tubing (20mm dia, 36.5 long), swinging type bracket, nozzle & globe valve (20mm size 0 and stop clock 7 nozzle spanner (Dunlop or similar superior make	No	8	5000	five thousand only	40000
8	Providing priming arrangement consisting of priming tank of capacity 900 litres fabricated out of 3 mm thick MS sheet with necessary brick masonry pedestal 7 draining pipes, graduated water level indicator, high and low level switches, water in and out connections, drain and overflow connections, fixing of sluice valve, non return valve, float valve assembly etc as reqd	job	1	14000	Forteen thousand only	14000
C)	FIRE ALARM & DETECTION SYSTEM					
1	Suppying, Installing, testing & commissioning of wall mounted type microprocessor control panel made of 16 SWG Ms sheet suitable for detectors installed in the fire dtection system ,covering following zones complete with 3 Nos potentail free contacts,as per specification excluding batteries.					
	a)12 zone	No	2	33000	Thirty three thousand only	66000
2	Supplying and fixing sealed maintenance free battery 12V, 7AH in the existingcontrol panel, including making connections etc as required.	No	4	1288	One thousand two hundred and eighty eight only	5152
3	Supplying , installation & Testing of Manual call points	Nos	47	850	eight hundred and fifty only	39950
4	Supplying , installation & Testing of Electronic Sounder	Nos	19	800	Eight hundred only	15200
5	Supplying , installation & testing of Photo Electric Smoke Detector	Nos	144	1900	One thousand nine hundred only	273600

Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
6	Supplying , installation & testing of Beam Detector	Nos.	6	4500	Four thousand five hundred only	27000
7	Providing and fixing 5"x5"x2" MS Box of 18 SWG including painting and covering the front portion with phenolic laminated sheet etc complete as required.	Nos	134	1900	One thousand nine hundred only	254600
8	Supplying , Laying – 2C x 1.5 sq. mm Al.conductor armoured FRLS cable with saddles , screws its accessories.	Mtr	2100	210	Two hundred and ten only	441000
9	Supplying , installation & Testing of Response Indicator	Nos.	29	450	Four hundred and fifty only	13050
10	Providing LAISON & CO-ORDINATION with Muncipal authorities and Fire Authorities for getting preliminary approval and final approval for fire fighting system including carrying out the following as required.					
	a) Preparation ,Submission and getting Approval of installation Drawings before start work.					
	b) Conducting Survey & approval of installation location by concerned authorities					
	c) Conducting Inspection and approval of the installation					
	d) Co-Ordination with Muncipal authorities & Fire authorities for commissioning of the installation.					
	e) Any other activity / approval related to the scope of this tenderer.					
	F) Contractor shall pay statutory fees required to be paid to Muncipal/Fire or any authorities in connectuion with fire fighting work and same shall be reimbursed after submitting necessary documentary proof.					
	Complete as above	Job	1	37299	Thirty seven thousand two hundred and ninty nine only	37299

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Item No	Sub-heads of estimates and item of work	Unit	Quantity	Rate	Rate in words	Amount
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3. ARENA LIGHTING

1	Supply, installation, testing and commissioning of sports flood light fixture suitable for 2 x 400W metal halide lamps similar to Bajaj/GE Cat Ref: BGENF 22 2x400 Mh/Glands 2X400 watts MH complete with cast aluminium control gear box. (For 750L ux illumination level)	Nos.	85.00	12658.00	Twelve Thousand six hundred and fifty eight only	1075930.00
2	Supply, installation, testing and commissioning of 400 W single ended tubular metal halide lamps for above fixtures.	Nos.	170.00	2880.00	Two thousand eight hundred and eighty only	489600.00
3	Supply, installation, testing and commissioning of Main Lighting panel as per specifications with following: Incomer: 1 No. 400A FP MCCB, 35kA Ammeter, voltmeter, indicating lamps Outgoings: 12 Nos. 63A FP MCCB, 10 kA with 63A contactors.	Nos.	1.00	210000.00	Two lakh ten thousand only	210000.00
4	Supply, installation, testing and commissioning of sub lighting panels as per specifications with following: Incomer: 1 No. 63A FP MCB Isolator. Outgoings: 12 Nos. 16A SP MCBs, each O/g with CT for sensing.	Nos.	10.00	19200.00	Nineteen Thousand two hundred only	192000.00
5	Supply, installation, testing and commissioning of switching control cum Mimic panel with push buttons for selective switching and mimic display for indicating healthiness of circuit of SLP.	Nos..	1.00	28800.00	Twenty eight thousand eight hundred only	28800.00
6	Supply, laying & clamping of Aluminium power cable 1.1 KV grade					
	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.					
	4 core 35 sq mm with factory made clamp	m	700.00	329.00	Three hundred and twenty nine only	230300.00
7	Supply, laying & clamping of copper power cable 1.1 KV grade					
	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured copper power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.					
	3 core 4 sq mm	m	2500.00	252.00	Two hundred and fifty two only	630000.00
8	Supply, laying & clamping of copper control cable 1.1 KV grade					
	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages, colour washing etc. as required.					
	24 core 1.50 sq mm using factory made saddles	m	300.00	630.00	Six hundred and thirty only	189000.00
9	Supplying and installation including all manner of supports/suspenders, anchor bolts etc for cable trays made out of suitable size channel sections, slotted angles, flats, MS plates etc as required including painting with 2 coats of synthetic enamel paint over a coat of zinc chromate primer, making good the damages, colour washing etc as required.	Kg	500.00	87.00	Eighty seven only	43500.00
10	Supplying and installation of supports, anchor bolts etc made out of suitable size single section MS angle, flats etc as required including painting with 2 coats of synthetic enamel paint	Kg	150.00	61.00	Sixty one only	9150.00
11	Supply and providing SMC chequered plate of the following thickness including cutting, fixing with the existing frame-work etc. as required for the cable trench covering.					
	10 mm thick	m ²	2.00	11246.00	Eleven thousand two hundred and forty six only	22492.00
	TOTAL OF ARENA LIGHTING					3120772.00
SUB TOTAL (Part B)						24593875

Abstract

Sub Total for Civil works (Part A)
SubTotal for Electrical works(Part B)

Rs. 165675891
Rs.24593875

GrandTotal

Rs.19,02,69,766

I/We agree to carry out the work at par with
* (1). at estimate rate

* (2). at% above estimate rate (in figure & words)

* (3). at% below the estimate (in figure & words)

* Note:- Strike out which ever is not applicable.

Date:-

Full name & signature of Tenderer