



**INDIAN INSTITUTE OF TECHNOLOGY GOA
GEC CAMPUS, FARMAGUDI, PONDA
GOA-403401**

**TENDER DOCUMENT FOR ANNUAL MAINTENANCE CONTRACT
OF ELECTRICAL WORKS AT IIT GOA ADMINISTRATION
BUILDING, OFFICES, DINING AREA, ACADEMIC BUILDINGS,
CLASSROOMS & LABORATORIES, D-2/C QUARTERS,
RAJMUDRA& TARANGAN BUILDING FLATS.**

NIT: C&EMD/Electrical/IITGOA/2019/001 DT.12-03-2019

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PART A (TECHNICAL BID)

1. NOTICE INVITING TENDER

1.1. INTRODUCTION

Indian Institute of Technology (IIT) Goa, hereinafter called IITG, invites sealed tenders from the eligible contractors for various electrical related maintenance and repair works of 1) administration building, 2) offices, 3) dining area, 4) academic buildings, 5) classrooms, 6) laboratories 7) D-2/C Quarter 8) Raj mudra & Tarangan Building Flats. Particulars of the work are as follows.

1.2 PARTICULARS

1.NIT No	C&EMD/ELECTRICAL/IIT GOA/2019/001 dt 07-03-2019
2.Name of work	Annual Maintenance & Repair works- ELECTRICAL
3.Location of work	IIT Goa Administration Building, Offices, Dining Area, Academic Building, Classrooms & Laboratories, D-2/C quarter, Raj mudra & Tarangan building flats.
4.Estimated Cost (Including GST)	Rs.10,99,667/- Only
5.Earnest Money Deposit	Rs.21,993/- Only
6.Performance Guarantee	Rs.54,993/- Only
7.Contract Period	One year (12 months). From date of issue of work order.
8.Tender Fee	Rs.500/- Only
9.Tender Basis and Mode	Two Stage (Technical Bid & Financial Bid)
10.Mode of Payment to IITG (Tender Fee & EMD)	Demand Draft/ Bank Guarantee in favour of IIT Goa Main Account payable at Goa. (Cheques will not be accepted)
11.Date, Time & Venue of Pre bid meeting.	25-03-2019 at 11.00 hrs at C&EMD Office, IIT Goa
12. Closing Date & Time of receiving of bids.	28-03-2019 at 15.00 hrs
13. Date & Time of opening of Technical Bid.	28-03-2019 at 15.30 hrs at C&EMD Office, IIT Goa
14. Date & Time of opening of Financial Bid.	Will be intimated to qualified agencies.
15.Address of tender issue, submission and opening	Tender documents will be available on the site as stated: https://www.iitgoa.ac.in (Under tender Section) & CPP Portal. Tender submission & opening place: C & EMD OFFICE, IIT GOA
16. Website for full and updated information.	https://www.iitgoa.ac.in (Under tender Section) & CPP Portal.

1.3. ELIGIBILITY CRITERIA

1.3.1. The bidder must be registered in appropriate class of works with Government organization like CPWD/ PWD/ MES or PSUs or those having experience in similar nature of works awarded by Government / Semi Government Organizations/ Government Funded Autonomous Organization or having experience in execution of similar works.

1.3.2. The bidder must have done at least 1 (ONE) similar work of value of 80% of the estimated cost or 2 (TWO) similar works for projects each of value 60% of the estimated cost or 3 (THREE) similar work for projects each of value 40% of the estimated cost with Government/ Semi-government/ PSU/ Government Funded Autonomous Organization during last 7 (seven) years preceding last date of the month of tender submission or having experience in execution of similar works.

Note:

- (i) The estimated cost is ₹10,99,667/- (Rupees Ten Lakhs Ninety nine thousand Six Hundred and Sixty Seven Only)..
- (ii) Similar works shall mean: Building works/ maintenance of Electrical works

1.3.3. The bidder must be registered with appropriate government authority as a bonafide business entity and must have GST registration certificate and Permanent Account Number of income tax.

1.3.5. The registrations and licenses should be valid during the execution phase.

1.3.6. Bidder must hold solvency certificate from any scheduled banks for a minimum value of 40% of the estimated cost, issued not earlier than 6 (six) months from the last date of submission.

1.3.7. Average annual turnover for the last three years of the bidder as per ITCC or profit & loss statement shall not be less than the estimated cost (i.e. Rs.10,99.667/-), not having incurred loss in more than two years, during last 5 years ending 31 Mar 2018.

1.3.8. The agencies should enclose the Xerox copies of the following;

- a) Performance certificate.
- b) GST Registration.
- c) PAN
- d) EPFO Registration Certificate.
- e) ESIC Registration Certificate.

INFORMATION TO BIDDERS

2.1. SCOPE OF WORK

2.1.1. The IITG invites tender for Annual Electrical Maintenance & repair works of IIT Goa of 1) administration building, 2) offices, 3) dining area, 4) academic buildings, 5) classrooms, 6) laboratories, 7) D-2/C Quarters, 8) Rajmudra & Tarangan Building Flats.

2.1.2. The contractor shall arrange to provide service on Saturdays, Sundays and other holidays in case of emergency as required by the Engineer in Charge, failing which penal recovery shall be made, decision of Engineer in Charge will be final.

2.1.3. The contractor shall provide a supervisor for supervising all the works carried out. The minimum qualification should be Diploma.

2.1.4. The complains received by the contractor during normal working hours should be attended to, at the shortest possible time.

2.1.5. The contractor shall provide daily report stating the nature of complaints/ work done, to the Engineer in Charge or authorized representative daily in the format.

2.1.6. The contractor shall provide & maintain a triplicate book for receiving the job complaint order from Engineer in Charge Daily in the approved format.

2.1.7. e) Each job is identified as following category based on its priority.

A – Normal - 3 working days

B – urgent - 1 working day

Penal recovery as under shall be made for delay in execution of work

A – Normal - Rs 100.00/ day

B – urgent - Rs 200.00/ day

Decision of Engineer in charge shall be final for deciding the job as A or B Category before allotting the job.

2.1.8. All the replaced items must be stored in the store room as specified by the Engineer in charge.

2.1.9. No debris shall be left over during the repair works under each item on any day. An area for 'Debris bins' will be identified on the request of contractor for collection of debris generated on day to day basis. The Debris from debris bin shall be cleared every month. The contractor must maintain adequate number of wheel barrows all the time for shifting the debris to Debris bin.

2.1.10. Minimum Labour strength and adequate material stored to be maintained on regular basis as under:

a) Electrician= 1 No.

b) Wireman= 1 No.

2.1.11. Police Verification Certificate of all workers shall be obtained by Contractor.

2.2. GENERAL INSTRUCTIONS

2.2.1. Bidding documents are to be obtained electronically through websites:<https://www.iitgoa.ac.in>(Under tender Section)& CPP Portal. The tender fee in the prescribed mode must accompany the tender documents issued electronically at the time of submission.

2.2.2. This bid document shall be read in conjunction with GCC (General Conditions of Contract) laid down in the CPWD manual and the applicable specifications of CPWD.

2.2.3. The bidder shall visit and inspect the site and obtain all information on his own responsibility and at own cost, which may be necessary for the purpose of quoting and submitting the tender. No excuse or ignorance as to site conditions and local information shall be accepted after awarding of the contract. Access to the site will be granted by the Engineer-in-charge on all working days within working hours.

2.2.4. The water and electricity required for the work shall be arranged by the agency.

2.2.5. All clarifications about the tender shall be sought by bidder on or before pre-bid meeting. The bidders may make suggestions which shall be considered during the Pre Bid Meeting. No queries shall be entertained after notification of replies to noteworthy queries received till the date of pre-bid meeting.

2.2.6. Completion certificate issued by Competent Authority will only be considered as credential. If the Completion certificate issued by Competent Authority does not reflect the type of work, then Final bill / Schedule of Quantity of the qualifying works also to be attached along with the Completion certificates. Certificate from private individuals / organizations for whom such works have been executed shall also be accepted.

2.2.7. The bidding document (consisting of the schedule of quantities of various types of items to be executed, the set of terms and conditions of the contract and other documents / drawings, if any), Corrigenda, Clarifications to Pre-bid queries can be downloaded from the website:<https://www.iitgoa.ac.in>(Under tender Section)Corrigenda, if any shall be published only on these website. The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason whatsoever.

2.2.8. All costs, charges & expenses that may be incurred in connection with the preparation of the tender shall be borne by contracting and the Institute accepts no liability whatsoever therefore.

2.2.9. Rates quoted by the bidders shall be inclusive of GST (Goods and Services Tax - Central, State and Interstate) and all applicable taxes. Income Tax and all other statutory deductions like labour cess etc. will be deducted from the bill as per prevailing rules.

2.2.10. Exemption to IITG against any tax/ duty/ fee/ surcharge/ charge/ cost, if any, found applicable or sought later from IITG after award shall be passed on to IITG by the contractor without dispute.

2.2.11. IITG reserves the right to reject any or all of the bids without assigning any reason.

2.2.12. Bid Validity: Bid shall remain valid for 120 days from the date of submission.

2.2.13. Firm Price: Bidder's quoted Rates/Prices for executing the activities under the Contract shall remain firm till the period of one year & shall not attract any escalation under any circumstances whatsoever.

2.2.14. If any information furnished by the bidder is found as false / fabricated, then his bid will be rejected and treated as cancelled. Even if such manipulation is detected at any stage after signing of the contract, it would lead to termination of the contract besides forfeiture of Earnest Money Deposit and liabilities towards prosecution. In such cases the bidder will be debarred from participation in future tendering process in IITG for next 05 (Five) years.

2.2.15. Earnest Money Deposit (EMD) of requisite amount and that in prescribed mode or proof of payment thereof shall be enclosed with the Technical Bid explained in following section.

2.2.16. Refund / Conversion of Earnest Money Deposit: The Earnest Money received shall be refunded to the unsuccessful bidders without any interest upon executing the Contract Agreement by successful bidder. The Earnest Money Deposit of successful bidder shall be retained and converted into part of Security Deposit.

2.2.17. Forfeiture of Earnest Money Deposit: Earnest Money Deposit will be forfeited in any of the following cases:

- (i) The bidder withdraws / modifies his tender during the period of Bid Validity.
- (ii) The bidder, in case of tie between lowest bids, refuses to submit revised offer.
- (iii) The bidder does not accept the correction of arithmetical errors of his tender.
- (iv) The bidder does not submit the performance guarantee within specified time after issue of work order.
- (v) Fails to commence the work after issue of work order within the specified time.

2.3. SUBMISSION OF TENDER

2.3.1. The sealed tenders shall be received at the C&EMD Office, IIT Goa, Goa College of Engineering Campus, Farmagudi, Ponda Goa-403401 up to 15:00hrs, 28th March 2019 or as per Corrigenda otherwise.

2.3.2. Tenders received after the due date and time shall not be considered.

2.3.3. Tenders shall be submitted in a sealed Master envelope super scribed "Annual Maintenance Contract - Electrical with the NIT No. C& EMD/Electrical/IITGOA/2019/001 dt 07-03-2019, containing three separate sealed covers, each clearly super scribed as "Tender Fee and EMD", "Technical Bid" and "Financial Bid" respectively, in the following manner:

2.3.4. Envelope-1 (Tender FEE & EMD) will consist of:

- i) Tender Fee for ₹ 500/- (Non-refundable), in the prescribed mode or proof of payment thereof. ii) Earnest Money Deposit of requisite amount, in the prescribed mode or proof of payment thereof.

2.3.5. Tender without payment of Earnest Money Deposit would be summarily rejected.

2.3.6. Envelope-2 (Technical Bid) will consist of:

- (i) Covering letter of the offer signed by firm's authorized signatory.
- (ii) Documents establishing the identity and authenticity of the bidder/ bidding firm
- (iii) Self-certified copies of all the documents in support of eligibility of bidder.

2.3.7. Envelope-3 (Financial Bid) will consist of the complete tender document, each page duly signed and stamped by the bidder as acceptance of the conditions, Declaration by Bidder and Financial Bid all duly filled-in, signed by the bidder or his/her authorized signatory and stamped.

2.4. EVALUATION OF BIDS AND AWARD OF WORK

2.4.1. The Technical Bid of bidder will be opened on the specified date and time of opening at the C& EMD Office, IIT GOA, GEC Campus, Farmagudi, Ponda Goa in the presence of willing bidders or their authorized representatives.

2.4.2. Date, time and place of opening of Financial Bid will be informed after evaluation of Technical Bid to the Technically Qualified Bidders.

2.4.3. Bids shall, first be checked for payment of Tender Fee and Earnest Money Deposit. Only those bids found to have duly paid/ submitted Tender Fee and Earnest Money Deposit shall be considered for evaluation.

2.2.4. Evaluation of Technical Bid: The bids received will then be assessed on the eligibility criteria mentioned at para 1.3 of Notice Inviting Tender. Bids found not meeting the eligibility criteria shall be considered non-responsive and shall be rejected summarily.

2.2.5. IITG retains the right to revert back to individual bidders with further clarifications / queries on the Technical Bid. The bidder has to respond to the queries within the specified time mentioned in the covering letter.

2.2.6. On the date & time specified for opening of Financial Bid or the Revised Financial Bids as the case may be will be opened on specified date and time.

2.2.7. EVALUATION OF Financial Bids: The Financial Bid should contain the complete bid document with duly filled in Schedule of Financial Quote. Financial Bids opened as above will be checked for arithmetical errors.

2.2.8. The successful bidder shall be issued Letter of Acceptance (LOA) of the bid, and be required to furnish a Performance Guarantee as per General Conditions of Contract (CPWD GCC Manual).

2.2.9. Letter of Award (Work Order) shall be issued to the successful bidder only after receipt of the Performance Guarantee, along with Program Schedule and the details of Technical Staff to be deployed for the work.

2.2.10. Agreement (Contract) consisting of complete tender document including conditions, bill of quantities, technical proposal and specialized services, drawings, if any, and acceptance thereof together with any correspondence leading thereto, shall be drawn and signed with the awardee after issue of Work Order.

2.2.11. Date of start of work shall be reckoned from 15th day from the date of issue of "Work Order".

3. UNDERTAKING BY THE BIDDER

UNDERTAKING

I / We have read and examined the Tender document including terms & conditions, specifications, bill of quantities, drawings and designs, general rules & directions, General Conditions of Contract, Special Conditions of Contract and all relevant other documents, publications and rules referred to in the Conditions of Contract (CPWD GCC) and all other contents in the tender documents for the work including applicable CPWD Specifications.

I / We, hereby tender for execution of the work specified for the Indian Institute of Technology Goa within the time specified and in accordance in all respects with the specifications, designs, drawings and instructions in writing.

We agree to keep the tender open for 120 days from the last date of its submission and not to make any modifications in its terms and conditions. A sum of Rs. _____ has been deposited in cash/ demand draft of a scheduled bank as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Director, Indian Institute of Technology Goa or his authorized officer shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that the Director, Indian Institute of Technology Goa shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein.

Further, I / We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I / We hereby declare that I / We shall treat the tender documents and other records connected with the work as secret / confidential documents and shall not communicate information derived there-from to any person other than a person to whom I / We am / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Seal & Signature of Contractor

Postal Address

Dated

Witness

Address

Occupation

NOTES

a) The contractor shall arrange to provide the service on Saturday, Sunday and other holidays in case of emergency as required by Engineer in charge, failing which penal recovery shall be made, decision of Engineer in charge will be final.

b) All breakdown calls /complaints received during normal working hours should be attended to, at the shortest possible time.

c) The contractor shall provide daily report stating the nature of complaints / work done to the Engineer in charge or authorized representative daily in the format.

d) The contractor shall provide & maintain triplicate book for receiving the job complaint order from Engineer in charge daily in the approved format.

e) Each job is identified as following category based on its priority.

A – Normal - 3 working days

B – urgent - 1 working day

Penal recovery as under shall be made for delay in execution of work

A – Normal - Rs 100.00/ day

B – urgent - Rs 200.00/ day

decision of Engineer in charge shall be final for deciding the job as A or B Category before allotting the job.

f) All the replaced items must be stored in the store room as specified by the Engineer in charge

g) No debris shall be left over during the repair works under each item on any day. An area for 'Debris bins' will be identified on the request of contractor for collection of debris generated on day to day basis. The Debris from debris bin shall be cleared every month. The contractor must maintain adequate number of wheel barrows all the time for shifting the debris to Debris bin.

h) Minimum labour strength and adequate material store to be maintained on regular basis as under:

a) Electrician = 1 No.

b) Wireman / Helper = 1 No.

i) Police Verification Certificate of all workers shall be obtained by Contractor.

j) Department labour (for other miscellaneous works not specified below) if required shall be provided by the contractor as and when the engineer in charge informs about it. The material for which if required will be provided by IIT Goa. The departmental labour will be paid as per prevailing market rates.

Name of Work: Annual maintenance and repairs of Administration Building, Offices, Hostel, Dining area, New Academic Block and the area of under IIT Goa.

Sr. No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
1	Wiring for light point / fan point /call bell point / exhaust fan point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable size GI box and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required .				
a)	Up to 8 meter's.	Point	40		
b)	Above 8 meter's .	Point	10		
2	Wiring for circuit / submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required .				
a)	2 X1.5 sq. mm +1X1.5 sq. mm for E.C.C	Mtr.	20		
b)	2 X2.5 sq. mm +1X2.5 sq. mm for E.C.C	Mtr.	20		
c)	2 X4 sq. mm +1X4 sq. mm for E.C.C	Mtr.	20		
d)	2 X6 sq. mm +1X6 sq. mm for E.C.C	Mtr.	20		
e)	2 X10 sq. mm +1X6 sq. mm for E.C.C	Mtr.	20		
f)	2 X16 sq. mm +1X16 sq. mm for E.C.C	Mtr.	20		
g)	4 X4 sq. mm +2X4 sq. mm for E.C.C	Mtr.	20		
h)	4 X6 sq. mm +2X6 sq. mm for E.C.C	Mtr.	20		
i)	4 X10 sq. mm +2X6 sq. mm for E.C.C	Mtr.	20		
3	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required.				
A	20 mm	Mtr.	20		
B	25 mm	Mtr.	20		
C	40 mm	Mtr.	20		
4	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface /recessed steel / PVC conduit as required.				

	2 X1.5 sq. mm +1X1.5 sq. mm for E.C.C	Mtr.	20		
	2 X2.5 sq. mm +1X2.5 sq. mm for E.C.C	Mtr.	20		
	2 X4 sq. mm +1X4 sq. mm for E.C.C	Mtr.	20		
	2 X6 sq. mm +1X6 sq. mm for E.C.C	Mtr.	20		
5	Supplying and fixing metal box of following sizes on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required.				
A	75 mm X 75 mm X 60 mm deep	Each	5		
B	100 mm X 100 mm X 60 mm deep	Each	5		
C	120 mm X 75 mm X 60 mm deep	Each	5		
D	120 mm X 120 mm X 60 mm deep	Each	5		
6	Supplying and fixing following sizes / modules, GI box along with modular base & cover plate for modular switches in recess etc. as required .				
	1 or 2 Module	Each	20		
	3 Module	Each	30		

	4 Module	Each	20		
	6 Module	Each	20		
	8 Module	Each	20		
	12 Module	Each	30		
7	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required .				
	5 /6 amps switch	Each	100		
	15 /16 amps switch	Each	60		
	3 pin 5 /6 amps socket outlet	Each	100		
	6 pin 15 / 16 amps socket outlet	Each	60		
	Bell push	Each	20		
	Telephone socket outlet	Each	20		
8	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	30		

9	Supplying and fixing call bell/ buzzer suitable for single phase, 230 volts, complete as required.	Each	10		
10	Supplying and fixing 3 pin, 5-amp ceiling rose on the existing junction box/ wooden block including connection etc. as required.	Each	10		
11	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required	Each	20		
A	2 X1.5 sq. mm +1X1.5 sq. mm for E.C.C	Mtr.	20		
B	2 X2.5 sq. mm +1X2.5 sq. mm for E.C.C	Mtr.	20		
C	2 X4 sq. mm +1X4 sq. mm for E.C.C	Mtr.	20		
D	2 X6 sq. mm +1X6 sq. mm for E.C.C	Mtr.	20		
12	Supplying and fixing of modular plate type 11-18 A motor starter unit complete with 25 A DP MCB and 20 A plug & socket flushed in wall with earthing attachment for Split / Window Air conditioner equiv. to Northwest (Complete unit).	Each	10		
13	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc., including supplying and fixing ball and socket arrangement, 2 no. down rods of 20 mm dia X 1.6 mm thick steel conduit up to 30 cm length, painting and wiring the down rods and connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	40		

14	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (up to 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	20		
15	Supplying and fixing of 32 mm dia X 2.00 meters long G.I. pipe (medium class) bracket for mounting of fluorescent / HPMV / HPSV street light fitting on pole including bending the pipe to the required shape, 2 no's 40 mm X 3 mm flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required.	Each	5		
16	Installation, testing and commissioning of ceiling fan including wiring the down rods of standard length (up to 30 cm) with 3 X 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.	Each	40		
17	Providing and fixing extra conduit down rod of 20 mm dia, 2 X 10 cm length wiring with 2 X 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	30		
18	Installation of exhaust fan in the existing opening including of all hardware's & making good the damage connection, testing, commissioning etc. complete as required.				
A	Up to 420 mm sweep	Each	10		
B	510 mm sweep	Each	5		
19	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and				

	commissioning etc. as required.				
	25A	Each	10		
	40A	Each	10		
	63A	Each	10		
20	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.)				
a)	Up to 35 sq. mm (clamped with 1 mm thick saddle)	Mtr.	10		
b)	Above 35 sq. mm and up to 95 sq. mm (clamped with 25X3 mm MS flat clamp)	Mtr.	10		
21	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc. as required, but excluding sand cushioning and protective covering.				
a)	Up to 35 sq. mm	Mtr.	10		
	Above 35 sq. mm and up to 95 sq. mm	Mtr.	10		
22	Supplying and making end termination with brass compression gland and lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				

A	2 X 6 sq. mm	Each	4		
B	2 X 10 sq. mm	Each	4		
C	2 X 16 sq. mm	Each	4		
D	4 X 10 sq. mm	Each	4		
E	4 X 16 sq. mm	Each	4		
F	3.5 X 25 sq. mm	Each	4		
G	3.5 X 35 sq. mm	Each	4		
H	3.5 X 50 sq. mm	Each	4		
I	3.5 X 70sq mm	Each	2		
J	3.5 X 95 sq. mm	Each	2		
23	Earthing with GI earth pipe 4.5 mtr long, 40 mm dia including accessories and proving masonry enclosure with cover plate having locking arrangement and watering pipe etc. without charcoal/coke and salt as required.	Each	2		
24	Earthing with copper earth plate 600 mm*600 mm*3 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of	Each	2		

	2.7 meter long etc. with charcoal / coke and salt as required.				
25	Providing and fixing earth bus of 50mm X5mm copper strip on surface for connection etc. as required.	Mtr.	2		
26	Providing and fixing 6 SWG dia GI wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required for GI pipe earthing.	Mtr.	10		
27	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required for copper plate earthing.	Mtr.	10		
28	Providing and fixing 25X5 mm copper strip on surface or in recess for connections etc. as required.	Mtr.	05		
29	Providing and fixing 25X5 mm G.I. strip on surface or in recess for connections etc. as required.	Mtr.	05		
30	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
A	6 way, Double door	Each	10		
B	8 way, Double door	Each	5		
C	12 way, Double door	Each	2		

31	Numbering of ceiling fan / Exhaust fan / Fluorescent fittings including cleaning of surface with detergent etc. as required.	Each	40		
32	Numbering of ceiling fan/ exhaust fan/ fluorescent fittings as required.	Each	20		
33	Supplying and fixing Cable End Boxes (IP 43) suitable for triple pole and neutral, sheet steel, Vertical MCB distribution board, 415 volts, on surface/ recess, complete with testing and commissioning etc.	Each	10		
34.	Providing following skilled Labour for 8 hours/day. 1. Wireman / Helper	Days	100		
	1. Electrician		100		

Make: -

FRLS Wire, 1.1 KV: - Finolex/Havells/Polycab

PVC pipe (MMS): - Presto plast/ Precision.

Switch/Socket/Regulator: - Legrand (Myrius range)/Crabtree Thames Platinum range/ Wipro(Nowa).

3 Pole Ceiling Rose/ Holder: - Anchor / SSK,

G.I pipe: - TATA (Medium) / Bansal (Medium) or Equivalent