ESTATE (E & M) WORKS SECTION
INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR

Notice Inviting Quotation

Quotation No: - IIT/E/E&M/2020-21/Qtn./37 Date: 22.02.2021

Sealed quotations on item rate basis are invited by Sr. EE (EW) from registered Electrical contractors of IIT Kharagpur/CPWD/MES/WBPWD/Kharagpur municipality and other bonafide contractors having valid GST, PAN and updated Electrical contractor license for below mentioned work. The approximate cost of the work is **₹ 1, 98,701/-(Rupees One lakh ninety eight thousand seven hundred and one only)**

NAME OF THE WORK: Electrical Modification & Renovation work for New Law Laboratory in RGSOIPL, IIT Kharagpur.

ISSUE OF QUOTATION	:	**FROM 22.02.2021**
LAST DATE OF SUBMISSION OF QUOTATION	**: -**	**10.03.2021 UPTO 11.00 AM**
QUOTATION OPENING DATE	**: -**	**10.03.2021 TIME: 11.30 AM**

TENDER DOCUMENTS can be downloaded from the Institute website www.iitkgp.ac.in & https://eprocure.gov.in. **Requisite Earnest Money: Please submit NSIC/MSEs Registration Certificate OR Bid Security Declaration Form (Annexure-III).** For any amendment /corrigendum please visit the Institute website www.iitkgp.ac.in & https://eprocure.gov.in.

The following documents to be submitted at the time of submission of bid:

i) GST
ii) PAN
iii) updated Electrical contractor license

ELIGIBILITY CRITERIA

1.1.1. The bidder must be registered in appropriate class of works with Government organization like CPWD/ PWD/ MES or PSUs or OEM or Authorized supplier and installer of OEM (Authority must be signed by OEM official not lower than General Manager or equivalent in corporate structure or those having experience in similar nature of works awarded by Government / Semi Government Organizations/ Government Funded Autonomous Organization.

1.1.2. 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.

Note:

(i) The estimated cost is **Rs. 1, 98,701/-(Rupees One lakh ninety eight thousand seven hundred and one only)**

(ii) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last date of receipt of applications for tender.

(iii) **Similar works shall mean**: Electrical maintenance and renovation works.

1.1.3. The bidder or the specialized agency the bidder intends to associate with must be registered with appropriate government authority as a bonafide business entity and must have GST registration certificate, Permanent Account Number of income tax.

1.1.4. Electrical work shall be executed by selected bidder

1.1.5. The validity of the registrations and licenses should be valid as on the date of tender submission.

(S. Ghosh)
Sr. Executive Engineer (EW)

Copy to:
1) Chief Engineer
2) Chief System Manager
3) SE(E&M)
4) Mr. M. Kumar, Sr Executive Engineer(EW)
5) Engineer (EW)
6) Sr. Assistant/Assistant / Junior Engineer (E&M)
7) Notice Board
8) Office file

1. INFORMATION TO BIDDERS

1.1. SCOPE OF WORK

1.1.1. The IITKGP intends to award the work of "**Electrical Modification & Renovation work for New Law Laboratory in RGSOIPL, IIT Kharagpur.".** The scope of work will also include Testing and commissioning of Transformer at factory after repairing and at site as per CPWD General Specifications for electrical works, Part-IV- Substation with up to date amendments.

1.1.2. Constraint: The job needs to be executed in Academic/Main building area without causing any disturbances to the normal functioning of offices/classes/departments and also road networks.

1.1.3. The vendor shall work out execution sequence and methodology so as to complete the project within the envisaged time and the estimated cost, duly handling the constraint mentioned above.

1.2. GENERAL INSTRUCTIONS

1.2.1. Bidding documents are to be obtained electronically through websites: on http://www1.iitkgp.ac.in/topfiles/tenders.php or https://eprocure.gov.in/epublish/app

1.2.2. This bid document shall be read in conjunction with GCC (General Conditions of Contract) available on http://www1.iitkgp.ac.in/topfiles/tenders.php.

1.2.3. 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.

1.2.4. IITKGP shall not provide any space at site for labour hutments.

1.2.5. All clarifications about the tender shall be sought by bidder on or before **10.03.2021, 11.00 AM** through e-mail to the Engineer-in-charge, **Mr. S. Ghosh, Senior Executive Engineer**
Tel: 03222-282522, Email: sghosh@hijli.iitkgp.ernet.in

1.2.6. 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 not be accepted.

1.2.7. The bidding document (consisting of specifications, 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), Addendum/Corrigenda, Clarifications to Pre-bid queries can be downloaded from the websites: http://www1.iitkgp.ac.in/topfiles/tenders.php or https://eprocure.gov.in/epublish/app Corrigenda, if any shall be published only on these websites *at any time before the closing time of tender.*

1.2.8. The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason whatsoever. *The tenderers who have downloaded the tender documents from website must visit the website and ensure that such addendum(s)/corrigendum(s) (if any) is also downloaded by them. This shall be the responsibility of the prospective registered bidders to check the web site for any such corrigendum/addendum before closing time of tender and ensure that bid submitted by them are in accordance with all the corrigendum's/addendums.*

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

1.2.10. **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 labourcess etc. will be deducted from the bill as per prevailing rules.**

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

1.2.12. IITKGP reserves the right to reject any or all of the bids without assigning any reason.

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

1.2.14. **Firm Price: Bidder's quoted Rates/Prices for executing the activities under the Contract shall remain firm till completion of the entire work & shall not attract any escalation under any circumstances whatsoever.**

1.2.15. 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 enforcing actions as mentioned in the Bid Security Declaration Form (Annexure-III) and liabilities towards prosecution. In such cases the bidder will be debarred from participation in future tendering process in IITKGP for next 05 (Five) years.

1.2.16. **Earnest Money Deposit (EMD)** of requisite amount and that in prescribed mode or proof of payment thereof shall be submitted with the Technical Bid explained in following section. MSEs registered with District Industries Centers, National Small Industries Corporation and any other body specified by Ministry of MSME or Startups as recognized by Department of Industrial Policy and Promotion shall be exempted from payment of EMD in the bid. The self attested photocopy of their evidence should be submitted by the bidder(s) along with the formal request letter for exemption.

(i) In case the NSIC/MSEs registration certificate is found invalid during evaluation, the bid of such bidder shall be rejected.

(ii) Bidder so exempted for submission of EMD shall have to submit an undertaking as per Annexure-II.

(iii) Bidder not having NSIC/MSEs registration has to submit Bid Security Declaration Form (Annexure-III) alongwith an undertaking as per Annexure-II.

Tender Document

Sealed quotations on item rate basis are invited by Sr. EE (EW) from enlisted and approved Electrical contractors of IIT Kharagpur /CPWD/MES/WBPWD/Kharagpur municipality and Other bonafide contractors having valid GST, PAN and updated Electrical contractor license

The work to be completed within **30 days** from the date of acceptance of work order placed by IIT Kharagpur

1. The Bidders are required to complete quotation, quote rate as per the schedule of quantities and sign on each page of tender documents before submission. The quotation will not be accepted other than our format. The completed set is to be enclosed in a sealed envelope addressed to:

Sr. Executive Engineer (EW).
Indian Institute of Technology, Kharagpur
Kharagpur -721302 (WB)

Tenders will be received up to 11.00 AM on 10.03.2021 with all necessary documents i.e. GST, PAN and Electrical contractor license in the office of Estate (E & M), Old Building, IIT Kharagpur.

Agency has to submit the self-attested copy of the documents .Without these documents tender will not be accepted.

2. No tender will be received after the expiry of the date and time notified for receiving tenders under any circumstances whatsoever.

3. **The tender will be opened at 11.30 AM on 10.03.2021** at above address in the presence of authorized representative of Bidder and Tender opening committee of IIT Kharagpur
4. Tender shall remain valid for acceptance for a period of 120 days from the notified last date of tender submission.
5. The price should be for the complete finished item of work and include all labour charges, material, taxes, overhead, duties, cess etc.
6. All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.

7. The Institute reserves the right to reject any or all bid without assigning any reason .If any information

furnished by the applicant is found incorrect at a later stage, he shall be debarred from tendering and taking up of any work in IIT Kharagpur.

8. The quantities given in BOQ against each items may vary i.e. increase or decrease as per site requirement, but rate will be firmed.

9. This tender notice shall form part of the contract documents.

10. Penalty will be imposed against delay of work as per the Institute rule.

11. The agency is fully responsible for the safety of working personnel and has to follow all government safety rules.
12. All the Govt. labour rules, regulations and latest Indian Electricity Rule are followed by the contractor while executing the Electrical work.

13. All statuary deduction will be deducted as per government rules.

14. Rates quoted by the contractors in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures, and in word. However, if a discrepancy is found the rates which correspond with the amount worked out by the contractor shall be taken as correct.
15. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words that the rate quote by the contractor in words should be taken as correct.
16. Where the rate quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rate quoted by the contractor will be taken as correct, not the amount.
17. The Tenderer whose tender is not accepted shall not be entitled to claim any costs, charges and expenses incidental to or incurred by him through or in connection with his submission of tender or its consideration by the Purchaser, even though the Purchaser may elect to modify/withdraw the Invitation to Tender or does not accept the tender.

18. Bidders are requested to witness the bid opening.

19. Bids shall, first, be checked for **NSIC/MSEs registration certificate or Bid Security Declaration Form (Annexure-III).** Only those bids found to have duly submitted **NSIC/MSEs registration certificate or Bid Security Declaration Form (Annexure-III)** shall be considered for evaluation.

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

21. IITKGP 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.

1.2.17. **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.

1.2.18. **Letter of Award (Work Order)** shall be issued to the successful bidder only after receipt of the Program Schedule with specific Milestones to be achieved as to complete the work within the stipulated time limit, details of his Technical Staff to be deployed as per ANNEXURE-I, and complaint handling arrangement for the Defect Liability Period and Complaint Redressal Mechanism **as per following para.**

2.4.8 (a) Contractor shall submit Complaint redressal arrangement with name & contact number of the contractor's authorized representative for the purpose.

1.2.19. **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 **within10 days** of the Letter of Award.

1.2.20. **Date of start** of work shall be reckoned from **the 07th day** of the issue of the Work Order.

1.2.21. **Defect Liability Period (DLP):** In partial modification to clause no.16 of General Conditions of Contract (GCC), the Defect Liability Period shall be **12 months** after the certificate final or otherwise of its completion of work or till the final bill has been prepared.

1.3. COMPLAINT REDRESSAL MECHANISM

1.3.1. All maintenance complaints shall be got addressed by the contractor to the satisfaction of Engineer-in-charge within 3 days from the date of issuance of the "Job Card" from IIT Kharagpur.

1.3.2. Complaints requiring completion time more than 3 days shall be responded specifically by the contractor with the scheme, in consultation with Engineer-in-charge, and timeline for compliance, to the Engineer-in-charge within 3 days from the date of issuance of the "Job

1.3.3. Any complaint left unattended by the contractor beyond 3 days without specific reasons on record shall attract levy of penalty of Rs 50/- per complaint per day from 4th day to 7th day and Rs 100/- per complaint per day thereafter recoverable from dues to the contractor.

ANNEXURE-I

TECHNICAL STAFF OF CONTRACTOR

Name of Work: Electrical Modification & Renovation work for New Law Laboratory in RGSOIPL, IIT Kharagpur.

DISCIPLINE	NAME	QUALIFICATION	EXPERIENCE	CONTACT NUMBER
Overall Project In-charge				
Engineer - Structure and Civil Works				
Engineer – Electrical & Mechanical Works				
In-charge - Safety, Health & Environment				

Seal & Signature of Contractor

ANNEXURE - II

UNDERTAKING FOR GCC COMPLIANCE

UNDERTAKING

We hereby undertake that we shall fulfill all the terms & conditions within the specified time frame, after the acceptance of our offer in case our offer is accepted; failing which IIT KHARAGPUR may go ahead to take necessary action such as reporting the non-compliance to appropriate Government authorities and barring us from future participation in IIT KHARAGPUR works.

Seal & Signature of Contractor

DATED:

ANNEXURE - III

Bid Security Declaration Form

Date:_____Tender No. _____

To (Insert complete name and address of the purchaser)

I/We, The undersigned, declare that :

I/We understand that, according to your conditions, bids must be supported by a Bid Security Declaration.

I/We, accept that I/we may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am/We are in a breach of any obligation under the bid conditions, because I/We

a) Have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instruction to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/We are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/ our Bid.

Signed: (insert signature of person whose name and capacity are shown)

In the capacity of (insert legal capacity of person signing the bid Securing Declaration)

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on …….day of …….. (Insert date of signing)

Corporate seal (where applicable)

Schedule of Quantities

Name of work: Electrical Modification & Renovation work for New Law Laboratory in RGSOIPL, IIT Kharagpur.

Sl. No.	Description	Unit	Qnty.	Rate (Rs.)	Amount (Rs.)
1	**Wiring for light point / fan point /call bell point / exhaust fan poin**t 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 . Make: FRLS Wire, 1.1 KV grade :- Finolex/Havells/R R KABEL, PVC pipe (MMS) :- Polycab/Precision /AKG/Presto Plaste, 3 Pole Ceilling Rose/ Holder :- Anchor / SSK, Switch/Socket/Modular Board :- Crabtree (athena)/ Wipro (Nowa)/ legrand (Myrius range)/ MK-Wraparound plus / Equivalent approved by Engineer in charge.				
a	Upto 6 metres.	Each	3		
b	Above 6 metres .	Each	2		
c	Above 9 metres .	Each	2		
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 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 . Make: FRLS Wire, 1.1 KV grade :- Finolex/Havells/R R KABEL, PVC pipe (MMS) :- Precision /AKG/Presto Plaste/Polycab / Equivalent approved by Engineer in charge.				
a	2 X1.5 sq mm +1X1.5 sq mm earth wire	Meter	10		
b	2 X2.5 sq mm +1X2.5 sq mm earth wire	Meter	50		
c	2 X4 sq mm +1X4 sq mm earth wire	Meter	300		
e	2 X10 sq mm + **1X6** sq mm earth wire	Meter	10		
g	4 X16 sq mm + **2X6** sq mm earth wire	Meter	20		
3	Supplying and fixing **metal GI box** of following sizes/modules(normal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required. Make: GI Box :- legrand (Myrius range)/ Wipro(Nowa)/MK-Wraparound plus/Crabtree (athena) / Equivalent approved by Engineer in charge.				
a	100 mm X 100 mm X 60 mm deep	Each	2		
b	150 mm X 150 mm X 60 mm deep	Each	1		
c	200 mm X 150 mm X 60 mm deep	Each	1		
4	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. Make:- PVC pipe (MMS) :- Precision/AKG/Presto Plaste/Polycab / Equivalent approved by Engineer in charge.				
a	20 mm	Meter	10		
b	25 mm	Meter	20		
c	32 mm	Meter	20		
5	Supplying and fixing following **sizes / modules, GI box along with modular base & cover plate** for modular switches in recess etc as required . Make :- Switch/Socket/Modular Board :- Crabtree (athena)/ Wipro(Nowa)/ legrand (Myrius range)/MK-Wraparound plus / Equivalent approved by Engineer in charge.				
a	1 or 2 Module (75 mm X 75 mm)	Each	1		
b	3 Module (100 mm X 75 mm)	Each	1		
c	6 Module (200 mm X 75 mm)	Each	6		

d	8 Module (125 mm X 125 mm)	Each	12		
e	12 Module (200 mm X 150 mm)	Each	2		
6	Supplying and fixing following **modular switch / socket** on the existing modular plate & switch box including connections but excluding modular plate etc as required . Make :- Switch/Socket/Modular Board/Bell Push :- Crabtree (athena)/ Wipro(Nowa)/Mk (WP)/ legrand (Myrius range) / Equivalent approved by Engineer in charge.				
a	5 /6 amps switch	Each	48		
b	15 /16 amps switch	Each	2		
c	3 pin 5 /6 amps socket outlet	Each	36		
d	6 pin 15 / 16 amps socket outlet	Each	1		
7	Supply of **LED Downlighter** with Robust Pressure Diecast Aluminum Housing of 125 mm to 150 mm dia. suitable for indoor recess mounting and electronic driver (Short Circuit & Surge Protection facilities) of the following specification :- CCT :- 6500K, **Lumen :- 2000,** CRI >= 80, P.f >= 0.95, Efficacy(Lumen/watt) > = 110, THD < 10 %, including connection with 1.5 sq mm FRLS PVC insulated copper conductor single core cable and earthing etc as required. Make - Havells / Philips /Jaquar /Bajaj/ Crompton Greaves/ Wipro/ Equivalent approved by Engineer in charge.	Each	28		
8	Installation, Testing, commissioning of Wall bracket / Ceiling fittings of all sizes and shapes containing upto two GLS/CFL/LED lamps per fittings, complete with all accessories including connection etc. as required.	Each	28		
9	Installation , testing and commissioning of pre- wired, fluorescent fitting /compact fluorescent fitting/LED fittings of all types complete with all accessories and tube/lamp etc. directly on false ceiling / wall including connection with 3 X1.5 sq mm FRLS PVC insulated copper conductor single core cable and earthing etc as required.	Each	1		
10	**Dismantling** of following items with good condition and shifting to site store etc. including mending good the damages to original finish.				
a	Light Fittings/Ceiling Fan/Wall Fan/Exhaust Fan etc. including accessories, old wiring & cable.	Each	40		
b	SPN DB/Main switch/ Industrial plug & socket DB/Metal Enclosure etc. including accessories , old cable & wiring.	Each	1		
11	**Supply of** one number Alminium conductor PVC insulated and PVC sheathed / XLPE, **Armoured Power Cable A2XFY** of 1.1 kV grade,, Confirming to IS: 1554/7098 (Part -1) 1988 with latest amendments. Make:- (Power Cable) :- Havells / RR Kable / Finolex / Polycab / Equivalent approved by Engineer in charge.				
	3.5 X 25 Sq mm	Meter	50		
12	**Laying of cable** as below after **cutting floor/pavement/wall**/ and making holes incl embedding the cable at an average depth as below and mending good the damages to original finish incl S+F of 1X10 SWG wire for ECC (Cable Dept Supply).				
a	From 2.5 sq mm to 35 sq mm at an average depth of 75 mm in floor/pavement/wall etc.	Meter	5		
b	Above 35 sq mm to 95 sq mm at an average depth of 100 mm in floor/pavement/wall etc.	Meter	5		
13	**Laying** and fixing of one number PVC insulated and PVC sheathed / XLPE **power cable** of 1.1 kv grade of following size **on wall surface** as required incl. S+F of 1X10 SWG GI wire for E.C.C making holes and manding good the damages to original finish incl painting.(Cable Dept supply),(Special Note: Screws should be guranteed for rust proof for one year.)				

a	Upto 35 sq mm (clamped with 1 mm thick saddle)	Meter	40		
b	Above 35 sq mm and upto 95 sq mm (clamped with 25X3 mm MS flat clamp)	Meter	5		
14	Supplying and making **end termination** with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required. Make :- Dowell's/ Equivalent approved by Engineer in charge.				
	3.5X25 sq mm (28 mm)	Each	2		
15	**Finishing of the PVC insulated wire ends** by socketting with pin/ring type copper sockets and insulated tapes etc. including supplying sockets(dowell's make), pvc tapes etc. Make: Dowell's / Equivalent approved by Engineer in charge.				
a	6 sq. mm	Set	24		
b	10 sq. mm	Set	12		
c	16 sq. mm	Set	12		
16	Supplying and fixing **MCB SS enclosure** with IP-20/30 protection, powder coated provision for two/four pole MCB, concealed in wall after cutting the wall & mending good the damages to original finish incl. painting, connection & provision for earthing attachment. Make :- L&T/ legrand/ Siemens/Hager / Equivalent approved by Engineer in charge.				
a	2 Way	Each	1		
b	4 Way	Each	1		
17	Supplying and fixing following way, **Single pole and neutral, sheet steel, MCB distribution board,** 240 V with IP-42/43 protection, 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). Make :- L&T/ legrand/ Siemens/Hager / Equivalent approved by Engineer in charge.				
	6 way, Double door	Each	1		
18	Supplying and fixing **Cable End Box** (Loose Wire Box) suitable for **single pole and neutral, sheet steel, 6 way, Double Door MCB distribution board**, 240 Volts, on surface/ recess, complete with testing and commissioning etc. as required.	Each	2		
19	Supplying and fixing following way, **horizontal type three pole and neutral, sheet steel, MCB distribution board,** 415 V with IP-42/43 protection, 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). Make :- L&T/ legrand/ Siemens/Hager / Equivalent approved by Engineer in charge.				
	8 way (4+24), Double door	Each	1		
20	Supplying and fixing **Cable End Box** (Loose Wire Box) suitable for **triple pole and neutral, sheet steel, 8 way, Double Door MCB distribution board**, 415 Volts, on surface/ recess, complete with testing and commissioning etc. as required.	Each	2		
21	Supplying and fixing **5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker** suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Make :- L&T/ legrand/ Siemens/Hager / Equivalent approved by Engineer in charge.				
a	Single Pole	Each	24		
b	Double pole	Each	1		

c	Triple pole	Each	1		
d	Triple pole and neutral	Each	1		
22	Supplying & fixing suitable size GI box wih modular plate and cover in front on surface or in recess including providing and fixing **25 A modular socket outlet and 25 A modular SP MCB, "C" curve** including connections, painting etc. as required.	Each	4		
23	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. Make :- Crabtree (athena)/ Wipro(Nowa)/ legrand (Myrius range)/MK-Wraparound plus / Equivalent approved by Engineer in charge.	Each	12		
24	Supplying and fixing **40 A to 63 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker** suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Make :- L&T/ legrand/ Siemens/Hager / Equivalent approved by Engineer in charge.				
a	Single Pole	Each	1		
b	Double pole	Each	1		
c	Triple pole	Each	1		
d	Triple pole and neutral	Each	1		
		Total Amount (Rs.)			

Total amount in words inclusive GST (Please mention applicable GST %):

Note:

1) All materials to be used needs prior approval of Engineer in charge.

2) All electrical work includes dismantling of old items in respective area and depositing them to the store as per rules.

3) For LED fittings (including driver and luminaries). - Minimum 05 years warranty at Kharagpur site must be given from the date of installation at free of cost.

4) For BLDC Motor Ceiling Fan - Minimum 03 years warranty at Kharagpur site must be given from the date of installation at free of cost.

5) For Wall Fan /Exhaust Fan - Minimum 02 years warranty at Kharagpur site must be given from the date of installation at free of cost.

6) Numbering of each LED fittings, Ceiling Fans, wall Fans with permanent marker for identification of the supplier along with supplier name & date.

7) No twisted joints are allowed for making connection of the Neutral & Earth wire in the Switch Boards, Suitable connectors should be used. No joints in wires are acceptable.

8) Ceiling rose should use for the connection of all luminous/ Fans etc.

9) As build drawing with circuit identification & measurement to be submitted after completion of work.

10) Valid Challan and Test/Guarantee certificates of all supplied materials by the contractor are to be submitted.

11) Suitable Copper/Aluminum lugs are to be used during any wire connection. Also GI anti-rust screws are to be used dering fixing of Pipes, Cables, Conduits, light fittings etc. on the wall.

12) Conduit pipes termination at Switch Board/ Power Board will be with suitable check -nuts/ conduit gland in case of surface wiring.

Signature of contractor

Special Condition for Electrical work

1. The work shall be carried out as per national code or C. P. W. D specifications for works with correction slips issued up-to date unless otherwise specified in the schedule of quantities for the works.
2. The following Indian Standard Specifications and Codes of Practice will apply to the equipment and the work covered by the scope of this contract. In addition the relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended upto date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable.

   BIS certified equipment shall be used as a part of the Contract in line with Government regulations. Necessary test certificates in support of the certification shall be submitted prior to supply of the equipment.

   It is to be noted that updated and current Standards shall be applicable irrespective of those listed below.

Low voltage Switchgear and Controlgear specifications	IS 13947 : 1993
Part I – General	
Part 2 – Circuit Breakers	
Part 3 – Switch Fuse Units	
Part 4 – Contactors and Motor Starters	
Part 5 – Control Circuit Devices	
Electrical Relays for power system protection	IS 3231 : 1986
Low voltage Switchgear and Control gear assemblies	IS 8623 : 1993
Marking of Switchgear busbars	IS 11353 : 1985
Degree of Protection of Enclosures for low voltage switchgear	IS 2147 : 1962
Code of Practice for selection, installation and maintenance of Switchgear	IS 10118 : 1982

4. No under-ground work or above the false ceiling shall be covered until the same has got approved by the Engineer-in-charge. The contractor will supply the drawings of specific works for approval, if required

5. All the old wiring has to be dismantled with proper care. The reusable old materials if any are to be handed over to departmental store with proper documentation and the other non reusable (nil reselling value) will be disposed by the contractor. The contractor shall clear the site thoroughly of all scaffolding materials & rubbish etc. left out of his work & dress the site around the building to the satisfactions & his decision in writing shall be final & binding on all concerned

6. Special care to be taken to avoid any theft of electrical fittings and fixtures while executing the work.

7. The location of Panel / DB / Switch board / Light point / Fan point will be as per existing location or as per the instruction of Engineer-in-charge.

8. All the wiring will be done with feruling and cable / Wire termination by required size or lugs of required materials and It should be noted that license wire man shall only be allowed for the wiring work.

Electrical safety at work site

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:
Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.

1. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.

2. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.

3. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.

4. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.

5. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.

6. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
7. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.

8. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.

9. A tools and tackles inspection register must be maintained and updated regularly.

10. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.

11. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.

12. No children shall be allowed to enter the workplace.

13. All the lifting tools and tackles shall be stored properly when not in use.

14. Clamps shall be used on Return cables to ensure proper earthling for welding works.

15. All the pressure gauges used in gas cutting apparatus shall be in good working condition.

16. Proper eye washing facilities shall be made in areas where chemicals are handled.

17. Connectors and hose clamps are used for making welding hose connections.

18. All underground cables for supplying construction power shall be routed using conduit pipes.

19. Spill trays shall be used to contain the oil spills while transferring / storing them.

20. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

21. Non-compliance to above shall invite a penalty recovery as per 3.22.8.