

INDIAN INSTITUTE OF TECHNOLOGY  
KHARAGPUR 721 302  
ESTATE (E&M) WORKS SECTION

IIT/E/E&M/T/38/2017-18

Dated 10.01.2018

**TENDER NOTICE**

On Behalf of Director, Indian Institute of Technology Kharagpur invites item rate tenders on prescribed tender documents under two bid system (Technical Bid and Price Bid) for the below mentioned work from the registered and eligible contractors of the Indian Institute of Technology, Kharagpur/CPWD/WBPWD/MES/Railways (SER)/Kharagpur Municipality/PSUs and other bonafied agencies meeting the minimum qualification criteria with a valid Electric License up to **3.30 pm on 24.01.2018**. The technical bid will be opened on **24.01.2018 at 4.30 p.m.** and the Price bid will be opened only of those firms, who will be found technically qualified of their technical bids on **31.01.2018 at 4.30 pm**.

<b>Sl. No.</b>	<b>Name of work</b>	<b>Estimate Amount in Rupees (₹.)</b>	<b>Earnest Money Deposit in Rupees (₹.)</b>	<b>Tender cost in Rupees (₹.)</b>	<b>Time Allowed for the completion of work</b>
1	Electrical works associated with repairing & rewinding of different type of fans and motors in different academic departments & different Halls of Residence at IIT Kharagpur	517549.00	10351.00 (To be submitted in a separate envelope)	1,000.00 (non-refundable)	12 Months

1. Contractors who fulfill the following requirements shall be eligible to apply.

**Eligibility criteria:-**. Bidder should have satisfactory completion certificates from Central/State Government Organization/ Central Autonomous Body/ Central or State Public Sector Undertaking for three similar works each costing not less than 40 % of estimated amount of work OR completion certificates of two similar works each costing not less than 60% of estimated amount of work OR completion certificate of one similar works each costing not less than 80% of estimated amount of work.

**Similar work Means Internal Electrification work.**

- 2 Contractor should have updated Electrical License, updated Trade License, and G.S.T No. & PAN No.,
- 3 The Technical bid shall be opened first on **24.01.2018 at 4.30 pm**. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date, if modified.
- 4 Corrigendum or addendum, if any would appear on the IIT Kharagpur website and not to be published in any news paper. IIT Kharagpur reserves the right to reject any or all the tenders in part or full without assigning any reasons thereof.
- 5 In case the bid submission date happens to be a non-working day for any reason, then the date will be automatically get extended to the next working day in the Institution.
- 6 **TECHNICAL BID:** Technical Bid must accompany the following documents with self attestation for Technical evaluation:
  - i) G.S.T
  - ii) PAN
  - iii) Completion Certificates of works justifying eligibility criteria.
  - iv) Updated Contractor's Electrical License
  - v) Updated Trade License
- 7 **The bidders must submit the bid in 3 (Three) nos. separate envelops each containing a) Technical Bid, b) Price Bid & c) Earnest Money Deposit &**

**Tender Paper cost. The Technical bid must have a forwarding application along with all relevant documents as required in the Technical Bid.**

- 8 Tender document to be downloaded from the Institute website [www.iitkgp.ac.in](http://www.iitkgp.ac.in) or [www.eprocure.gov.in/cppp](http://www.eprocure.gov.in/cppp) and the tender shall be submitted along with DD of ₹.1000/- (towards the non refundable cost of bid document) in favour of “IIT Kharagpur” and payable at kharagpur, **otherwise the tender will be treated as cancelled.**

9 Detailed information and tender document may be seen at our web site [www.iitkgp.ac.in](http://www.iitkgp.ac.in)

(Mahesh Kumar)

Sr. Executive Engineer (EW)

Copy to:-

- 1) Prof. in-Charge (Electrical Works)
- 2) Prof. in -Charge (IIC ) :- with a request for publication of tender notice  
In Institute Web site
- 3) Registrar, I.I.T Kharagpur.
- 4) Executive Engineer (Civil)
- 5) Dy. Registrar (F &A)
- 6) Dy. Registrar (S&P):- with a request for uploading the tender notice & document  
on CPPP
- 7) Notice Board, EPDS.
- 8) Notice Board, Estate (E &M) Head office, Old Building

9) Office file.

**Indian Institute of Technology, Kharagpur**

**Estate (E&M) Works Section**

**Tender Document**

For

**Name of the Work:** Electrical works associated with repairing & rewinding of different type of fans and motors in different academic departments & different Halls of Residence at IIT Kharagpur. (The approximate cost of the work is ₹.5,17,549/- (Rupees Five Lakh Seventeen Thousand Five Hundred & Forty Nine Only).

- 1 The site for the work is available/or the site for the work shall be made available in the parts as specified below.
- 2 The time allowed for carrying out the work will be 12 (Twelve) Months from the day after the date of written orders to commence the work.
- 3 Bids not received by the due date and time shall be rejected and representative of such bidders shall not be allowed to attend the bid opening.
- 4 **Earnest money:** ₹.10,351.00 (Rupees Ten Thousand Three Hundred & Fifty One only) in the form of demand draft in favour of IIT Kharagpur payable at Kharagpur Earnest Money shall be returned to the unsuccessful bidders at the earliest after finalisation of the contract. No interest shall be paid on Earnest Money Deposit. The offer without Earnest Money or with short Earnest Money or Earnest Money deposit in the form other than specified herein above shall be liable for rejection.

The Earnest Money shall be forfeited if:

- a) The tender is revoked during its validity period.
  - b) The prices are increased unilaterally after the tender opening and during validity of offer by the tenderer,
  - c) The owner accepts the tenderer's bid proposal and the tenderer refuse to enter into contract after the contract is awarded to him,
- 5 The contractor should quote the figures as well as in words the rate and amount tendered by them. The amount for each item should be worked out and the requisite totals given.

When a contractor signs a tender in an Indian Language the total amount tendered should also be written in the same language.

6. The contractor whose tender is accepted will also be required to furnish by way of **Security Deposit** for fulfillment of his contract, an amount equal to 10 % of the tendered value of the work. For the successful bidder i.e. the contractor, the earnest money will automatically be converted as a part of Security Deposit; the balance security deposit will be retained from each running bill till such time the total value of security deposit (i.e. 10% of the total contract value) is achieved. This Security Deposit will be kept with IIT Kharagpur till the satisfactory completion of the project and subsequent Defect Liability Period of six months.
7. The acceptance of a tender will rest with the authority who does not bind himself to accept the lowest tender, and reserves to himself the authority to reject any or all the tenders received without the assignment of a reason. All tenders in which any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.
8. Canvassing in connections with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
9. All rates shall be quoted on the proper form of the tender alone.
10. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated to the Engineer-in-Charge.
11. Special care should be taken to write the rates in figures as well as in words, and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word "Rs." should be written before the figure of rupees and words "P" after the decimal figures, "e.g., Rs.2.15P" and in case of words "Rupees" should precede and the word "Paise" should be written at the end. Unless the rate is in whole rupees and followed by the words "only" it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the work "only" should be written closely following the amount and it should not be written in the next line.

12. The Institute does not bind himself to accept the lowest or any tender and reserve to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
13. Sales-tax, purchase tax, turnover tax, service tax, VAT, Octroi, labourcess, insurance or any other tax on materials, machinery and T&P, labour or any other item/service in respect of this contract shall be payable by the contractor and Institute will not entertain any claim whatsoever in respect of the same.
14. The contractor shall not be permitted to tender for works in the Institute in which his near relative is posted as Divisional Accountant or as an Officer in any capacity between the grades of Superintending Engineer and Engineer (Both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Officer in the Institute. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute.
15. The contractor shall give a list of Institute employees related to him.
16. No Engineer or Officer rank or other employees employed in Engineering or Administrative duties in an Engineering Department of the Govt. of India Institute is allowed to work as a contractor for a period of two years of the retirement from Govt. service Institute, without the previous permission of the Govt. of India Institute. This contractor is liable to be cancelled if either the contractor or any of this employees is found at any time to be such a person who had not obtained the permission of the Govt. of India Institute as aforesaid before submission of the tender or engagement in the contractor' service.
17. The tender for the work shall remain open for acceptance for period of **120 days** from the date of opening of the tender. If any tenderer withdraws his tender before the said period or makes any modifications in terms & conditions which are not acceptable to the Engineer-in-charge then Institute shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money. Institute shall without prejudice to any other right or remedy, be at liberty to forfeit the whole of the earnest money if the tenderer, whose quotation is accepted, fails to commence

the work specified in the NIQ (along with changes in scope, if any) in the prescribed time or abandons the work before its completion.

18. The contractors exempted from payment of earnest money/security deposit in individual cases should attach with the tender an attested copy of the Institute's letter exempting them from the payment of earnest money and security deposit and should produce the original whenever called upon to do so.

19. The tender for the work shall not be witnessed by a contractor or contractors who himself/themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render tenders of the contractors tendering as well as witnessing the tender liable to summary rejection.

20. The Contractor shall submit list of works which are in hand (Progress) in the following form:

Name of Work	Name and particulars of Division where work is being executed.	Amount of work	Position of works in progress	Remarks

21. 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.

22. 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.

23. 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.

24 Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub soil, laying route, the form and nature of site, the means to access the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost of materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the bid documents. Submission of tender by a tenderer implies that he has read this notice and all other tender documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having bearing on the execution of the work.

25 All the Govt. labour rules, regulations and latest Indian Electricity Rule are followed by the contractor while executing the Electrical work.

26 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.

## **Schedule of Quantities**



## Schedule of Quantities

<b>Electrical works associated with repairing &amp; rewinding of different type of fans And motors in different academic departments &amp; different Halls of Residence at IIT Kharagpur.</b>					
<b>Sl. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty.</b>	<b>Rate (Rs.)</b>	<b>Amount in ( Rs.)</b>
1	Overhauling and servicing of ceiling fan/exhaust fan/wall fan/ pedestal fan by checking the wire insulation, connection and applying new grease to the bearing, oil seal cleaning & oiling, replacement of bushes and shafts, nuts & bolts, safety pin, insulator etc as required. Old material to be returned to site store.	no	50		
2	Complete rewinding of faulty fans of following size as per standard code of practice with equivalent/approved SWG GR-1 super enamelled copper wire. Old material to be returned to site store.				
a)	Ceiling fan (48")	no	10		
b)	Ceiling fan (56")	no	10		
c)	Exhaust fan (9")	no	15		
d)	Exhaust fan (12")	no	10		
e)	Exhaust fan (15")	no	5		
f)	Exhaust fan (18")	no	10		
g)	Exhaust fan (24")	no	5		

h)	Wall fan (16")	no	40		
i)	Air circulate Wall fan (24")	no	5		
j)	Pedestal fan (16")	no	30		
k)	Pedestal fan (24")	no	10		
3	Supplying and replacing of Shaft & bush of all size of different type of fans.	no	20		
4	Supplying and replacing of following sizes of faulty bearing of SKF make with proper greasing. The damaged bearing are to be returned to the site store.				
a)	Bearing 6201	no	50		
b)	Bearing 6202	no	50		
c)	Bearing 6203	no	30		
d)	Bearing 6204	no	20		
5	Painting of all types of fans with two coats of paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent etc as required.	no	200		
6	Supplying and replacing of following sizes of faulty condenser of metal body of EPCOS/ TRIPCON or approved make. The faulty condenser are to be returned to site store.				
a)	Capacitor of 1.5 MFD	no	30		
b)	Capacitor of 2.0 MFD	no	50		
c)	Capacitor of 2.25 MFD	no	100		
d)	Capacitor of 2.5 MFD	no	100		
e)	Capacitor of 3.15 MFD	no	25		
f)	Capacitor of 4.0 MFD	no	20		

g)	Capacitor of 6.0 MFD	no	10		
h)	Capacitor of 8.0 MFD	no	10		
i)	Capacitor of 10.0 MFD	no	10		
j)	Capacitor of 15.0 MFD	no	10		
k)	Capacitor of 20.0 MFD	no	5		
l)	Capacitor of 60/80 MFD	no	5		
m)	Capacitor of 80/100 MFD	no	5		
n)	Capacitor of 100/120 MFD	no	5		
7	Numbering of all fans as required with synthetic enamel paint of approved brand.	no	200		
8	Replacing of rubber bush, nuts & bolts with washer and safety pin of different size.	no	30		
9	Replacing of GI nuts and bolts with washer.	no	20		
10	Supplying and fixing of following size of starter spare parts (1Ph./3Ph.) and old material to be returned to site store.				
a)	Front housing and moving bridge kit ML 0-1.5	no	5		
b)	Front housing and moving bridge kit ML 2-3	no	5		
c)	Spare coil MU1-2	no	5		
d)	Spare coil M11.5	no	5		
e)	Spare coil ML3	no	5		
f)	Spare coil ML4	no	5		
g)	Spreader Link kit	no	5		
h)	Over load realy 1amp-14amp.	no	5		
i)	Timer 3-10sec.	no	5		

j)	Combination coil 230v/440v	no	5		
11	Complete rewinding of faulty motors of following size as per standard code of practice with equivalent/approved SWG GR-1 super enameled copper wire. Old material to be returned to site store.				
a)	Upto 1hp of single phase motor (without capacitor and bearing)	no	2		
b)	Upto 2hp of single phase motor (without capacitor and bearing)	no	2		
c)	Upto 3hp of single phase motor (without capacitor and bearing)	no	2		
d)	Upto 4hp of single phase motor (without capacitor and bearing)	no	2		
e)	Upto 5hp of single phase motor (without capacitor and bearing)	no	2		
12	Supplying and fixing of 145 degree centregrate thermister in wall fan.	no	25		
13	Supplying and fixing of following size of exhaust fan blade.				
a)	Upto 12" exhaust fan.	no	5		
b)	Upto 15" exhaust fan.	no	5		
c)	Upto 18" exhaust fan.	no	5		
14	Supplying and fixing of 48"ceiling fan blade	no	10		
15	Supplying and fixing of ceiling fan cannopy.	no	50		
16	Supplying and fixing for pvc blade for wall fan/pedestal fan.	no	20		
	<b>Sub Head A</b>				
	<b>Total</b>				
1	overhauling and servicing of ceiling fan/exhaust fan/wall fan/ pedestal fan by checking the wire insulation, connection	no	300		

	and applying new grease to the bearing, oil seal cleaning & oiling, replacement of bushes and shafts, nuts & bolts, safety pin, insulator etc as required. Old material to be returned to site store.				
2	Complete rewinding of faulty fans of following size as per standard code of practice with equivalent/approved SWG GR-1 super enameled copper wire. Old material to be returned to site store.				
a)	Ceiling fan (48")	no	400		
b)	Ceiling fan (56")	no	50		
c)	Exhaust fan upto (12")	no	145		
d)	Exhaust fan upto (18")	no	50		
e)	Exhaust fan upto(24")(1ph.&3ph.)	no	4		
f)	Wall fan (16") any size and model	no	50		
3	Replacement/Alterations of shaft for fans.	no	20		
4	Replacement of fan condenser clamp	no	50		
5	Painting of all types of fans with two coats of paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent etc as required.	no	200		
6	Supplying and fixing 3 pin 5amp ceiling rose on the junction box/wooden block including connection etc as required.	no	40		
7	Supplying and replacing of following sizes of faulty bearing of SKF make with proper greasing. The damaged bearings are to be returned to the site store.				
a)	Bearing 6201	no	10		
b)	Bearing 6202	no	100		

c)	Bearing 6203	no	100		
d)	Bush	no	50		
8	Supplying and replacing of following sizes of faulty condenser of metal body of EPCOS/ TRIPCON or approved make. The faulty condenser are to be returned to site store.				
a)	Capacitor of 2.0 MFD	no	170		
b)	Capacitor of 2.25 MFD	no	40		
c)	Capacitor of 2.5 MFD	no	200		
d)	Wall fan capacitor as reqd.	no	20		
e)	Exhaust/Pedestal fan capacitor as reqd.	no	10		
9	Numbering of ceiling fan/exhaust fan/wall fan/pedestal fan as required with synthetic enamel paint of approved brand and manufacture.	no	650		
10	Rubber reel, nut and bolts with washers and safety pin of different size.	set	45		
11	G.I. Nuts and through bolts with washer.	no	45		
Total Amount in Words:			<b>Total Amount :</b>		

## TENDER

I/We have read and examined the invitation for bid, Bidding data, Specifications applicable, Drawings & Designs, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the Bidding document for the work.

I/We hereby tender for the execution of the work specified for the Director within the time specified in Bidding data, viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions given in guidelines to Bidders and in Clause 4.1 of the General Specification and Condition of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for (120) days from the due date of submission thereof and not to make any modifications in its terms and conditions.

A sum or ₹. \_\_\_\_\_ has been deposited in demand draft of a scheduled bank having DD No. \_\_\_\_\_ Dated \_\_\_\_\_ as earnest money. If I/we, fail to furnish the prescribed performance guarantee within prescribed period. I/we agree that the said Director or his successors in office 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 Director or his successors in office 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 and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Bidding data and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 4.2 of the General Specification and Condition of contract of the Bidding document.

I / we hereby declare that I/we shall treat the bidding documents, drawings 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.

I / We agree to carry out the work at the quoted Price of ₹.

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Dated-----

Signature of Contractor

Witness: -

Address

Address:-

Occupation.

### **Special condition of Contract**

1. The work shall be carried out as per National Code/CPWD specification or P.W.D. specifications for works at West Bengal or otherwise as 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 obligatory under the IE Rules, that all Electrical Installation works shall be executed under qualified Electrical Supervisor holding Electrical Supervisor's Certificate of Competency granted by the State Licensing Board.

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 Controlgear 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

3. Prior to dispatch of equipment the Institute reserves the right to inspect the same at the manufacturer's works and the contractor shall provide and secure every reasonable access and facility at the manufacturers works for inspection,

for witness of all acceptance and routine tests as per relevant Indian Standards. Contractor shall give a reasonable notice of about 15 days for outstation and 2 days for local for the purpose of test, and witness of all major equipments. Routine test will be carried out through proper calibrated Instruments at Site.

4. The work shall be treated as on works contract basis and the rates tendered shall be for complete item of work, inclusive of taxes (including works contract tax, if any), duties and levies etc. and all charges for items pertaining to the completed work, such as packing, forwarding, insurance, freight and delivery at site for the materials to be supplied by the contractor, watch and ward of all materials at the site, labour related expenses as per relevant labour laws, testing of materials/ samples etc.
5. Being and individual works contract / maintenance contract, sales tax, excise duty, Service Tax etc are not payable separately. The works contract tax, income tax and Labourcess shall be deducted from the bills of the contractor at the prescribed rates. The Contractor shall be responsible to take as specified insurance such as CAR policy, Third Party, Workmen's compensation, etc. for the period of construction and maintenance as per contract.
7. The work will be carried out as per instructions given by the Engineer-in-charge and as per layout plan and the contractor shall be bound to carry out the work in accordance with revised and / or modified drawing.
8. All the materials to be used in the work shall have to be got approved by the Engineer-in-charge prior to fixation and to be recorded in site register.
9. 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
10. All charges or the municipal fees and other taxes that may be payable as per local municipal rules are to be paid by the contractors and his rates for such items shall be inclusive of all such charges. Nothing extra will be paid on his account by the department.
11. The contractor shall construct suitable go-down at the site of work for storing the materials safe against damage by Sun, Rain, dampness, fire, theft, etc. at his own cost. He shall also employ necessary watch and ward establishment for tools and plant and other materials issued to him at his own cost. No extra payment shall be made on this account
12. The contractor is assumed to have visited the site before quoting the rates and so the work is to be completed in all respects before handover.
13. The work is to be completed before the stipulated time; otherwise the Institute reserves the right to penalize the contractor as per rule.

- 14 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
- 15 Special care to be taken to avoid any theft of electrical fittings and fixtures while executing the work.
- 16 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.
- 17 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.
- 18 The quantities mentioned in the Schedule of works are subjected to change as per exact site requirement.
- 19 All the labour rules, regulations are be followed while executing the Electrical work.
- 20 Prior to commencement of the work Registration from labour enforcement office has to be taken. Also it may be noted that minimum wages as per minimum wages Act must be paid to the contract labours
- 21 After completion of the work and during maintenance period liability of the contractor, the work shall also be subjected to 'Post construction inspection and testing'. In case the materials or articles incorporated in the work are found to be inferior, though the sample collected for the same might have been passed at the time of execution, it shall be the responsibility of the contractor to replace the same at his own cost, failing which the IIT may rectify the same at the risk and cost of the contractor or IIT may accept the work as sub-standard, and cost be adjusted from the outstanding security deposit, as per the terms and conditions of the contract for the work. Defect liability period is one year.
- 22 Safety of engaged manpower of Contractor is the Contractor's responsibility. The successful tenderer shall at all times indemnify the Institute, consequent on this work contract. The successful Tenderer shall be liable, in accordance with Indian law & Regulations for any accident occurring due to any cause and the Institute shall not be responsible for any accident and damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipment under the supervision of the successful bidder in so far as the latter is responsible. The successful Tenderer shall also

provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful Tenderer due to above.

- 23 Safety of materials issued by the Department to the Contractor is the contractors' responsibility.

### **Special condition for Safety at the 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:

Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet shall be always on. Drivers, helpers and operators are no exception.

1. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
2. No one is allowed to work without adequate foot protection.
3. 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.
4. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
5. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.

6. Adequate illumination at workplace shall be ensured before starting the job at night.
7. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
8. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
9. 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.
10. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
11. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.
12. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
13. A tools and tackles inspection register must be maintained and updated regularly.
14. 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.
15. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
16. No children shall be allowed to enter the workplace.
17. All the lifting tools and tackles shall be stored properly when not in use.
18. Clamps shall be used on Return cables to ensure proper earthing for welding works.

19. Return cables shall be used for earthing.
20. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
21. Proper eye washing facilities shall be made in areas where chemicals are handled.
22. Connectors and hose clamps are used for making welding hose connections.
23. All underground cables for supplying construction power shall be routed using conduit pipes.
24. Spill trays shall be used to contain the oil spills while transferring / storing them.
25. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

