

**ESTATE ELECTRICAL & MECHANICAL WORKS HEAD OFFICE
INDIAN INSTITUTE OF TECHNOLOGY
KHARAGPUR 721 302**

NOTICE INVITING TENDER

No. : IIT/E/E&M/T/46/2016-17
Dt. : 28.03.2017

1. Sealed tenders are invited on behalf of the Director, Indian Institute of Technology, Kharagpur from eligible electrical Contractors of CPWD/PWD/IIT/MES/Railways/PSUS/Central Govt. or State Govt. Departments for the following works :

Sl. No.	Name of Work & Estimated Value	Estimated Amount (₹)	Tender fee Value of DD	Earnest Money (₹)	Time allowed.
1	Supply, installation, testing and commissioning of 45kVAR APFC panel at Anicut Pump House, IIT Kharagpur.	1,17,533.00	500/	2,351.00 By DD in favour of IIT Kharagpur payable at Kharagpur on any Nationalized Bank	2 Months
2	Electrical renovation work for Room No. C-226 in the Department of Physics	1,25,893.00	500/	2,518.00 By DD in favour of IIT Kharagpur payable at Kharagpur on any Nationalized Bank	1 Month
3	Electrical renovation work for installation of electron beam deposition system in old CRF building.	1,14,591.00	500/	2,292.00 By DD in favour of IIT Kharagpur payable at Kharagpur on any Nationalized Bank	1 Month
4	Electrical renovation works in Raman (F-142) & Bhatnagar (F-116) Auditorium, IIT Kharagpur.	92,452.00	500/-	1,850.00 By DD in favour of IIT Kharagpur payable at Kharagpur on any Nationalized Bank	1 Month

The above estimate, however, is given merely as a rough guide.

TENDER DOCUMENTS can be downloaded from the Institute website www.iitkgp.ac.in. Requisite Tender fee (non-refundable) to be paid by demand draft in favour of “IIT Kharagpur” on any nationalized Bank of India payable at Kharagpur Branch as stated above at the time of submission of Bid.

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

- i) VAT
- ii) PAN
- iii) Work Completion Certificates justifying eligibility criteria
- iv) Updated Electrical Contractor Licence
- v) Updated Trade Licence valid upto 31.03.2017

Eligibility criteria :

Contractors who fulfill the following requirement shall be eligible to apply :
Three works each costing not less than 40% of estimated cost or two works each costing not less than 60% of estimated cost or one work costing not less than 80% of estimated cost executed under Central Government /State Government/Central Autonomous Body/Central Public Sector undertaking.

Kindly note the following information as per the Table below:

Date of Submission of Bid	12 th April 2017 upto 3:30 P.M.
Date of opening of Bid	12 th April 2017at 4:30 P.M.
Tender Paper Cost (Non-refundable) & Earnest Money Deposit	To be paid by demand draft in favour of “IIT Kharagpur” on any nationalized Bank of India payable at Kharagpur Branch in two separate envelopes. Earnest Money will be converted to Security Deposit of successful tenderer.
The submission of bid must have a forwarding application along with self attested all relevant documents as required.	

The scope of work under the Tender shall include supply of Plant and Machinery, Erection of Equipment, Testing and Commissioning, supply of working Drawing, Elimination of teething problems and handing over the plant.

The Tenderers are requested to inspect the sites and satisfy themselves about the working conditions and site requirements before submitting the Tender.

(S Ghosh)
Executive Engineer (Electrical)

Copy to :

1. Registrar, IIT Kharagpur
2. Prof.-In-Charge (Electrical Works)
3. Prof.-In-Charge, IIC--- with a request to upload the tender notice in the Institute Website
4. Superintending Engineer (Civil)
5. Dy. Registrar (F&A)
6. Notice Board, EPDS
7. Notice Board, Estate (E&M) Head Office

Tender Document

For

Name of the Work : Supply, installation, testing and commissioning of 45kVAR APFC panel at Anicut Pump House, IIT Kharagpur.

Last Date and Time of Submission of Bid : 12th April 2017 upto 3:30 P.M.

Date and Time of Opening of Bid : 12th April 2017 at 4:30 P.M.

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 02 (Two) Months from the day after the date of written orders to commence the work.
3. 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.
4. When a contractor signs a tender in an Indian Language the total amount tendered should also be written in the same language.
5. Earnest Money, amounting to Rs.2,351.00(Rupees Two thousand three hundred fifty one only) in Demand Draft in favour of “ IIT Kharagpur” on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover superscribed with , “Supply, installation, testing and commissioning of 45kVAR APFC panel at Anicut Pump House, IIT Kharagpur.”.
6. Earnest Money of the successful bidder is to be converted into security deposit, further sum amounting 10% or as applicable will be deducted from your running bill(s)/final bill.
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 up to two decimal places. While quoting the rate in schedule of quantities, the word “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, labour cess 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's service.
17. The tender for the work shall remain open for acceptance for a 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 a liberty to forfeit the said earnest money.
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
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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.

Supply, installation, testing and commissioning of 45kVAR APFC panel at Anicut Pump House, IIT Kharagpur.

Sl. No.	Description of Item	Unit	Qty.	Rate (Rs.)	Amount
1	<p>Design,Supply,Erection,Testing and Commissioning of 45 kVAR power factor improvement panel made out of 14 SWG CRCA sheet steel,modular,compartmentalized,powder coated painting,self standing on angle iron frame with the following feature :-</p> <p>a)I/C 160 Amps,4 Pole MCCB =01 no with spreader link, extended rotary handle and ON,OFF,TRIP indication of the I/C unit.</p> <p>b) 3 no X 15 kVAR Heavy Duty Capacitor Bank are to be provided</p> <p>c) 5 Stage APFC Relay (equivalent to etaCon L5 5 stage 5 Amps 415 V coil Voltage,Model No:ERP ML 05D 00</p> <p>d) TPN Bus Bar(Cu/Al.) of 300 Amps capacity with colour insulated sleeved.</p> <p>e) Auto/Manul operational facilities with manul Start,Stop,Push button and ON OFF indication.</p> <p>f) Analog Voltmeter + selector switch and Analog Ammeter with CTs and selector switches are required in APFC panel.</p> <p>Erection:To be erected on floor with grounting of angle iron legs in floor with 75 mm X 10 mm angle and height 2.5 ft to 3 ft.</p> <p>Approx Dimension:1400 mm X 1000 mm X 600 mm</p> <p>Make: CT:Resin Cast KAPPA make MCCB/MCB/HRC fuse/Push Buttons/Indicating Lamps etc. L&T/ Kaycee make. Capacitor Duty Contactor :L&T/Epcos/Legrand</p> <p>Note:Contractors are to submit the electrical G.A.drawing and layout drawings for departmental approval before placing order.(Strictly as per Anx-1 attached herewith</p>	No	1		

2	Supplying & fixing of Extra Current Transformer of 400/5A, Class-1, 10 VA Capacity as required to be connected of the panel of which the p.f. has to be improved.	No	1		
3	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 .(From newly installed CT in the existing panel to APFC relay.) i) 2 X 2.5 sq.mm + 1X 2.5 sq.mm earth wire	Mtrs.	30		
4	Supplying of 1.1kv grade, 70 sq.mm, 3.5 core, XLPE insulated overall sheathed stranded aluminium conductor flat steel strip armoured cable. Confirming to IS:7098 part-I with latest amendments. Make: Havells/Gloster/Nicco/RPG/KEI	Mtrs.	30		
5	Laying and fixing of one number PVC insulated XLPE power Cable of 1.1 kV grade either in trench/wall/surface as the case may be with proper saddling & GI earth wire for the I/C of the APFC panel. a) Above 35 sq.mm and upto 95 sq.mm	Mtrs.	30		
6	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) 3.5 Core X 70 sq.mm	No.	2		
7	Earthing attachment complete of the APFC panel with S&F of 2 run 10 SWG GI wire from the existing earthing base in the room with all hard wares as required.	Mtrs.	20		
Rupees in words					

The SLD & GA of the Capacitor Bank are to be submitted by the Contractor for approval

1 by the Dept.

Anx - 1

45 kVAR, 415 Volt $\pm 10\%$ AC, APFC Panel

Sl.No.	ITEMS	PARTICULARS
1.	Rating of APFC Panel	45 kVAR
2.	Quanty	1No.
3.	Mode	Auto and Manual option
4.	Rated Voltage of the Panel	415 V ± 10 % AC
5.	Frequency	50 Hz ± 5 %
6.	No of Phase	3 Phase
7.	<u>Enclosure Details</u>	Free Standing Floor Mounting with legs made out of suitable angle iron. Non-Compartmentalized Design Note: The APFC enclosure should be compact in size For indoor application, The panel dimensions should be 1400 mm X 1000 mm X 600 mm (Approx)
8.	Protection	IP - 42
9.	Application	Indoor
10.	<u>Capacitors</u>	
	Type	APP (All Propylene) Heavy duty Capacitors.
	Standard	Confirming to IS – 13585 (1994)/IEC – 60931 (1996)
	Inrush Current – 1	>300 times rated current
	Impregnation	Non PCB Oil
	Temperature Category	-40 to +65 degrees
	Dielectric Losses in Watts/kVAR	<0.2(test report to be submitted)
	Total Losses in Watts/kVAR	<0.5(test report to be submitted)
	Cooling	Natural
	Safety	Internal HRC fuses
	Type/Routine Testing	CPRI/ERDA/UCL(test certificate to be provided)
	No of Steps	3
	Configuration	3 X 15 kVAR
	Voltage Withstand Capacity	\sim 650 Volt
11.	Switchgear Details Incomer	160 Amps,4 Pole,36 kA MCCB,2 set Spreader Link
	Steps Outgoing	HRC Fuses & Contractor (Suitable for Capacitor)
12.	<u>APFC Relay</u>	<u>5 Stage</u> Microprocessor based digital based with the following <u>features</u> a.) APFC relay Controller should sense the kVAR required to achieve preset target pf by automatically switching ON/OFF the capacitor unit or stage. Note: a.)The capacitor compensation should be released by measuring the reactive power of the system through 3 CTs from all 3 phases, as our load is unbalanced b.) Auto detection & usage of optimum capacitor step c.) Circular and linear logic (1:1:1:1:1:1), in which the output relays are controlled in a circular sequence, thus allowing a more even distribution of operations on contacts and considerably reducing maintenance required. d.)Maintain consistent power factor which has been user set

		(desired pf setting between 0.85 lag to 0.95 lead) e.) Auto and Manual mode option.
13.	<u>Capacitor bank Switching on delay</u>	a.)1 to 255 sec. in steps of 1 sec. for switching between different banks b.)Minimum 30 sec + above setting for same bank switching (Timing accuracy \pm 20%)
14.	<u>Indication</u>	<u>Real time data indication of the following</u> a.) PF b.) Lag/lead status c.) Total capacitance in line (in terms of kVAR) d.) No of switching operations e.) Active power f.) Reactive power g.) Apparent power h.) Voltage,Current,Frequncy display
15.	<u>Protection relays</u>	<u>APFC system should have the following protections</u> a.) Over Voltage protection relay b.) Over Current protection relay c.) Earth fault protection relay d.) Under Voltage release e.) Overload and short circuit protection
16.	<u>Power Contractors</u>	<u>Capacitor duty Contractors shall comply with standards IEC/EN 60947.with the following features:</u> a.) Rated operational current le of 3 phase capacitors in open in Amps should be 36 Amps b.) Max. Operational voltage should be around 650 volts c.) Rated insulation voltage should be around 690 volts d.) Rated impulse voltage should be around 8 kV e.) Electrical life in millions should be around 0.2 (i.e. 0.2 millions) f.) Should be able to handle high in rush currents of 300 times of In (300 times of normal current)
17	<u>Current Transformers</u>	Vendor has to provide total 6 nos of feedback (i.e. measuring CT's) CT's to give feed back to APFC panel from the our existing bus bar and CT shall comply with the requirements of IS 2705. The details/dimensions of the CT/bus bar as follows : a. CT's (Class-1, 160/5A resin cast type) of 3 nos. for main panel which should fit in our existing Busbar cross section of 125 mm X 55 mm for 1 st site. b. CT's (Class-1, 125/5A resin cast type) of 1 no.the existing panel to be fitted in.
18	<u>Other detail</u>	Vendor has to provide complete drawing catalogue, technical literature along with their offer.

In addition to above details, the vendor has to note down the following main features.

1. The APFC controller should be able to control the pf consistently at optimum range (i.e. around 0.95) at all load conditions without any hunting or harmonics problem and ensuring smooth voltage regulation. Our load varies from 10 kW to 130kW (approx.), kVA varies from 12 kVA to 150 kVA (approx.) & our load consists of odd harmonics & the maximum THD (total harmonic distortion) is 5% approx.
2. The capacitor compensation by each APFC controller should be released by measuring the reactive power of the system through 3 CT's from all 3 phases, as our load is unbalanced.
3. The capacitor banks should be protected from high inrush current during switching.
4. The capacitors should have the protection of over-voltages or surges during switching or re-switching by ensuring proper discharge of capacitors before switching. A time-delay of min 30 sec.+ above setting should be provided for same bank switching.
5. Capacitors should be of continuous duty type & should be suitable for very frequent switching operations.
6. All materials supply, installation, testing & commissioning including CTs, PTs, wires lugs etc. are in scope of the party wiring by copper wires of suitable rating as per IS-8623/1997 with proper lugs & ferrules.
7. Scope of Work: All materials supply, installation, testing & commissioning including CTs, PTs, wires lugs etc. are in scope of the party wiring by copper wires of suitable rating as per IS-8623/1997 with proper lugs & ferrules.

GENERAL SPECIFICATION AND CONDITIONS

1. The work shall be carried out as per National Code or P.W.D. specifications for works at West Bengal or other wise as specified in the Schedule of Quantities for the works.
2. The rates on percentage quoted by the contractors shall be for all leads, lifts, depth etc. unless otherwise specified in the schedule of quantities attached to agreement.
3. 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 the revised instruction and /OR modified drawing.
4. The brick shall be second class and / or first class bricks or a specified in the schedule of quantities and shall be of local best available size. To use first class brick only for construction of feeder pillar foundation.
5. All the materials such as stone chips. Sand pipes and other materials to be used in the work shall have to be approved by the Engineer-in-Charge not below the rank of Assistant Engineer.
6. No pipe line shall be covered until the same has been approved by the Engineer-in-Charge.
7. All charges for the Municipal fees and other taxes that may be payable as per local Municipal rules be paid by the contractors and his rates for such items shall be inclusive of all such charges. Nothing extra will be paid on this account by the department.
8. 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.
9. After laying of cable in underground the trench must be strictly mended and duly rammed with a rammer or rolled with a roller.
10. The fences damaged while digging the trench in individual quarters must be mended using barbed wire and bamboo or concrete pillars.
11. All G.I. items mentioned in the entire tender should be or hot dipped galvanization.
12. All light brackets are to be made first as specified in the tender and then hot dipped galvanizations are to perform. No cracks are acceptable on brackets.
13. Empty cable drums are to be deposited to the Section or Store as desired by Site-in-Charge.
14. Any item used while execution of the work, should be duly approved by the department.
15. 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. Currently the minimum wage as per G.O.I norms is Rs.283/- which must be followed.
16. The Site Supervisors should possess supervisory competency certificate and the Electricians should have proper work permits.
17. Safety of materials issued by the Department to the Contractor is the contractors' responsibility.
18. 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.

Tender Document

For

Name of the Work : Electrical renovation work for Room No. C-226 in the Department of Physics

Last Date and Time of Submission of Bid : 12th April 2017 upto 3:30 P.M.

Date and Time of Opening of Bid : 12th April 2017 at 4:30 P.M.

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 01 (One) Month from the day after the date of written orders to commence the work.
3. 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.
4. When a contractor signs a tender in an Indian Language the total amount tendered should also be written in the same language.
5. Earnest Money, amounting to Rs.2,518.00(Rupees Two thousand five hundred eighteen only) in Demand Draft in favour of “ IIT Kharagpur” on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover superscribed with , “Electrical renovation work for Room No. C-226 in the Department of Physics”.
6. Earnest Money of the successful bidder is to be converted into security deposit, further sum amounting 10% or as applicable will be deducted from your running bill(s)/final bill.
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 incase 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, labour cess 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 of 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's 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.
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
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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.

Electrical renovation work for Room No. C-226 in the Department of Physics

Sl. 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 PVCinsulated copper conductor single core cable etc as required .				
a	Upto 6 metres.	Each	6		
b	Above 6 metres .	Each	11		
2	Wiring for circuit / submain wiring alongwith 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	Meter	80		
b	2 X2.5 sq mm +1X2.5 sq mm for E.C.C	Meter	90		
c	2 X4 sq mm +1X4 sq mm for E.C.C	Meter	160		
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	Meter	40		
b	25 mm	Meter	50		
4	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	4		
b	100 mm X 100 mm X 60 mm deep	Each	2		
c	150 mm X 75 mm X 60 mm deep	Each	2		
d	150 mm X 150 mm X 60 mm deep	Each	2		
5	Supplying and fixing following sizes / modules ,GI box along with modular base & cover plate for modular switches in recess etc as required .				
a	1 or 2 Module	Each	13		
b	3 Module	Each	2		
d	12 Module	Each	10		
6	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required .				
a	5 /6 amps switch	Each	30		
b	15 /16 amps switch	Each	12		
c	3 pin 5 /6 amps socket outlet	Each	38		
d	6 pin 15 / 16 amps socket outlet	Each	12		

7	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required	Each	4		
8	Supply 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 Airconditioner equiv. to Northwest (Complete unit).	Each	2		
9	Supply & fixing of 36 - 45 Watt, 5700K - 6000K, 100 lumen/watt (approx) luminous efficacy modular LED luminaire suitable for recess armstrong/ grid ceiling and POP mounting complete with electronic driver including connection with 1.5 sq mm FRLS PVC insulated copper conductor single core cable and earthing etc as required. Make - Havells , Equivalent to LHEWDRP7PL1W042 / Syska / Philips / Bajaj.	Each	9		
10	Supply & Fixing of 220-240 volt, a.c.,50 HZ, single phase, 70 watt,1330 RPM, 400 mm sweep,90 CMM air delivery Wall Mounting Fan complete with all accessories and mounting with grouted frame/ clamp arrangements & other necessary accessories connection with mending good to the damages, Equivalent to Crompton Greaves(Riviera Super feel)/ Usha (Mist Air Ultra)/Polar(Mistral).	Each	8		
11	Supply & Fixing of wall/recessed mounted type fornt operated power , Double door SPN 04 Way MCB DB (IP-43) with provision for FP MCB as incomer , including supply & fixing of the the following C- curve, 10 kA 100 A , FP MCB -----1 No.	Each	1		
Rupees in words					

Make :-

DB/ MCB/ MCCB/ Metal Enclosure :- Legrand/ Siemens/ Schneider.

FRLS Wire, 1.1 KV :- Finolex/Havells/Gloster/Rajnigandha/KEI.

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,

Power Cable :- Havells / Gloster / Finolex / Polycab.

N.B :- 1) All materials to be used before prior approval of Engineer in charge.

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

3) For LED fittings - Minimum 05 years warranty must be given from the date of installation. Also LM 79 & LM 80 Certification by any National or International accredited Laboratory is mandatory.

4) Numbering of each LED fittings with permanent marker for identification of the supplier along with supplier name & date.

GENERAL SPECIFICATION AND CONDITIONS

1. The work shall be carried out as per National Code or P.W.D. specifications for works at West Bengal or other wise as specified in the Schedule of Quantities for the works.
2. The rates on percentage quoted by the contractors shall be for all leads, lifts, depth etc. unless otherwise specified in the schedule of quantities attached to agreement.
3. 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 the revised instruction and /OR modified drawing.
4. The brick shall be second class and / or first class bricks or a specified in the schedule of quantities and shall be of local best available size. To use first class brick only for construction of feeder pillar foundation.
5. All the materials such as stone chips, Sand pipes and other materials to be used in the work shall have to be approved by the Engineer-in-Charge not below the rank of Assistant Engineer.
6. No pipe line shall be covered until the same has been approved by the Engineer-in-Charge.
7. All charges for the Municipal fees and other taxes that may be payable as per local Municipal rules be paid by the contractors and his rates for such items shall be inclusive of all such charges. Nothing extra will be paid on this account by the department.
8. 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.
9. After laying of cable in underground the trench must be strictly mended and duly rammed with a rammer or rolled with a roller.
10. The fences damaged while digging the trench in individual quarters must be mended using barbed wire and bamboo or concrete pillars.
11. All G.I. items mentioned in the entire tender should be or hot dipped galvanization.
12. All light brackets are to be made first as specified in the tender and then hot dipped galvanizations are to perform. No cracks are acceptable on brackets.
13. Empty cable drums are to be deposited to the Section or Store as desired by Site-in-Charge.
14. Any item used while execution of the work, should be duly approved by the department.
15. 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. Currently the minimum wage as per G.O.I norms is Rs.283/- which must be followed.
16. The Site Supervisors should possess supervisory competency certificate and the Electricians should have proper work permits.
17. Safety of materials issued by the Department to the Contractor is the contractors' responsibility.
18. 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.

Indian Institute of Technology, Kharagpur
Estate (E&M) Works Section

Tender Document

For

Name of the Work : Electrical renovation work for installation of electron beam deposition system in old CRF building.

Last Date and Time of Submission of Bid : 12th April 2017 upto 3:30 P.M.
Date and Time of Opening of Bid : 12th April 2017 at 4:30 P.M.

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 01 (One) Month from the day after the date of written orders to commence the work.
3. 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.
4. When a contractor signs a tender in an Indian Language the total amount tendered should also be written in the same language.
5. Earnest Money, amounting to Rs.2,292.00(Rupees Two thousand two hundred ninety two only) in Demand Draft in favour of “ IIT Kharagpur” on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover superscribed with , “Electrical renovation work for installation of electron beam deposition system in old CRF building.”.
6. Earnest Money of the successful bidder is to be converted into security deposit, further sum amounting 10% or as applicable will be deducted from your running bill(s)/final bill.
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 word “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, labour cess 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's 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 a liberty to forfeit the said earnest money.
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
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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.

Electrical renovation work for installation of electron beam deposition system in old CRF building.

Sl. 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 PVCinsulated copper conductor single core cable etc as required .				
a	Upto 6 metres.	Each	2		
b	Above 6 metres .	Each	1		
2	Wiring for circuit / submain wiring alongwith 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 X2.5 sq mm +1X2.5 sq mm for E.C.C	Meter	20		
b	2 X4 sq mm +1X4 sq mm for E.C.C	Meter	100		
c	4 X4 sq mm +2X4 sq mm for E.C.C	Meter	20		
d	4 X16 sq mm +2X16 sq mm for E.C.C	Meter	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	Meter	5		
b	25 mm	Meter	10		
4	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	2		
b	100 mm X 100 mm X 60 mm deep	Each	2		
5	Supplying and fixing following sizes / modules ,GI box along with modular base & cover plate for modular switches in recess etc as required .				
a	1 or 2 Module	Each	1		
d	12 Module	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 .				
a	5 /6 amps switch	Each	6		
b	15 /16 amps switch	Each	3		
c	3 pin 5 /6 amps socket outlet	Each	6		
d	6 pin 15 / 16 amps socket outlet	Each	2		

7	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 Airconditioner equiv. to Northwest (Complete unit).	Each	1		
8	Supply of 1144mm Pre wired 20 Watt 3000K,1800 -2100 lumen LED light and wall mounted LED batten with extruded aluminium heat sink for efficient heat dissipation & integrated electronic driver with all accessories. including connection with 3X1.5 sq mm FRLS PVC insulated copper conductor single core cable and earthing etc as required. Make - Havells , Equivalent to LHEWEBP5IN1W020 / Syska / Philips / Bajaj.	Each	1		
9	Installation , testing and commissioning of pre- wired, fluorescent fitting /compact fluorescent fitting/LED fittings of all types complete with all accessories and tube 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	3		
10	Supply of 38 - 45 Watt, 5700K - 6000K, 100 lumen/watt (approx) luminous efficacy modular LED luminaire suitable for recess armstrong/ grid ceiling and POP mounting complete with electronic driver including connection with 1.5 sq mm FRLS PVC insulated copper conductor single core cable and earthing etc as required. Make - Havells , Equivalent to LHEWDRP7PL1W042 / Syska / Philips / Bajaj.	Each	2		
11	Supply of one number Aluminium conductor PVC insulated and PVC sheathed / XLPE, Armoured Power Cable of 1.1 kV grade,, Confirming to IS: 1554/7098 (Part -1) 1988 with latest amendments.				
	3.5X35 sq mm	Meter	30		
12	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 mending good the damages to original finish incl painting.(Cable Dept supply)				
	Upto 35 sq mm (clamped with 1 mm thick saddle)	Meter	20		
13	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)				
	From 2.5 sq mm to 35 sq mm at an average depth of 75 mm in floor/ pavement/wall etc.	Meter	10		

14	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.				
	3.5X35 sq mm (32 mm)	Each	2		
15	Supply & Fixing of wall/recessed mounted type fornt operated power ,double door TPN 04 Way VTPN MCB DB (IP-43)with provision for FP MCB as incomer and SP/TP MCB as outgoing till 63 Amp. as instructed by site incharge, including supply & fixing of the following C-curve, 10 kA -- 63 A , FP MCB = 1 No., 32 A , TP MCB = 01 Nos.,16 A SP MCB = 02 Nos., 25 A SP MCB = 04 Nos., 32 SP MCB = 03 Nos. and 100 A FP MCB = 01 Nos. & 63 A TP MCB = 01 Nos	Each	1		
16	Supply,fixing and necessary connection of wall/recessed mounted type 32 Amp 3P+N+E-FP, P17 Tempra Plug and Socket DB, including 25 A , FP C-curve, 10 kA MCB. Make - Legrand, Equivalent to Cat. No.- 6078 72 & 4086 98 respectively.	Each	1		
17	Supply,fixing and necessary connection of wall/recessed mounted type 32 Amp 2P+E-DP, P17 Tempra Plug and Socket DB, including 32 A , DP C-curve, 10 kA MCB. Make - Legrand, Equivalent to Cat. No.- 6078 73 & 4086 17 respectively.	Each	1		
18	Supply,fixing and necessary connection of wall/recessed mounted type 16 Amp 2P+E-DP, P17 Tempra Plug and Socket DB, including 16 A , DP C-curve, 10 kA MCB. Make - Legrand, Equivalent to cat. No.- 6078 70 & 4086 14 respectively.	Each	1		
19	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 2.7 metre long etc with charcoal / coke and salt as required.	Each	1		
20	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with nut, bolt, spring, washer etc.as required.(Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	Meter	15		
21	Providing and fixing earth bus of 50mm X5mm copper strip on surface for connection with 02 Nos. insular, nut, bolt, washers etc. as required.	Meter	0.3		
22	Supply and Fixing medium gauge Gi pipe(ISI-Medium) protection for cable entry including bending the pipe to the required shape complete as required with laying of wire/cable through pipe.				

40 mm	Meter	8		
Rupees in words				

Make :-

DB/ MCB/ MCCB/ Metal Enclosure :- Legrand/ Siemens/ Schneider.

FRLS Wire, 1.1 KV :- Finolex/Havells/Gloster/Rajnigandha/KEL.

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,

Power Cable :- Havells / Gloster / Finolex / Polycab.

N.B :- 1) All materials to be used before prior approval of Engineer in charge.

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

3) For LED fittings - Minimum 05 years warranty must be given from the date of installation. Also LM 79 & LM 80 Certification by any National or International accredited Laboratory is mandatory.

4) Numbering of each LED fittings with permanent marker for identification of the supplier along with supplier name & date.

GENERAL SPECIFICATION AND CONDITIONS

1. The work shall be carried out as per National Code or P.W.D. specifications for works at West Bengal or other wise as specified in the Schedule of Quantities for the works.
2. The rates on percentage quoted by the contractors shall be for all leads, lifts, depth etc. unless otherwise specified in the schedule of quantities attached to agreement.
3. 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 the revised instruction and /OR modified drawing.
4. The brick shall be second class and / or first class bricks or a specified in the schedule of quantities and shall be of local best available size. To use first class brick only for construction of feeder pillar foundation.
5. All the materials such as stone chips, Sand pipes and other materials to be used in the work shall have to be approved by the Engineer-in-Charge not below the rank of Assistant Engineer.
6. No pipe line shall be covered until the same has been approved by the Engineer-in-Charge.
7. All charges for the Municipal fees and other taxes that may be payable as per local Municipal rules be paid by the contractors and his rates for such items shall be inclusive of all such charges. Nothing extra will be paid on this account by the department.
8. 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.
9. After laying of cable in underground the trench must be strictly mended and duly rammed with a rammer or rolled with a roller.
10. The fences damaged while digging the trench in individual quarters must be mended using barbed wire and bamboo or concrete pillars.
11. All G.I. items mentioned in the entire tender should be or hot dipped galvanization.
12. All light brackets are to be made first as specified in the tender and then hot dipped galvanizations are to perform. No cracks are acceptable on brackets.
13. Empty cable drums are to be deposited to the Section or Store as desired by Site-in-Charge.
14. Any item used while execution of the work, should be duly approved by the department.
15. 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. Currently the minimum wage as per G.O.I norms is Rs.283/- which must be followed.
16. The Site Supervisors should possess supervisory competency certificate and the Electricians should have proper work permits.
17. Safety of materials issued by the Department to the Contractor is the contractors' responsibility.
18. 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.

Tender Document

For

Name of the Work : Electrical renovation works in Raman (F-142) & Bhatnagar (F-116) Auditorium, IIT Kharagpur.

Last Date and Time of Submission of Bid : 12th April 2017 upto 3:30 P.M.
Date and Time of Opening of Bid : 12th April 2017 at 4:30 P.M.

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 01 (One) Month from the day after the date of written orders to commence the work.
3. 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.
4. When a contractor signs a tender in an Indian Language the total amount tendered should also be written in the same language.
5. Earnest Money, amounting to Rs.1,850.00(Rupees One thousand eight hundred fifty only) in Demand Draft in favour of “ IIT Kharagpur” on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover superscribed with , “Electrical renovation works in Raman (F-142) & Bhatnagar (F-116) Auditorium, IIT Kharagpur”.
6. Earnest Money of the successful bidder is to be converted into security deposit, further sum amounting 10% or as applicable will be deducted from your running bill(s)/final bill.
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 up to two decimal places. While quoting the rate in schedule of quantities, the word “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, labour cess 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 of 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's 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.
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
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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.

Electrical renovation works in Raman (F-142) & Bhatnagar (F-116) Auditorium, IIT Kharagpur.

	Description	Qty	Unit	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 FR LS PVCinsulated copper conductor single core cable etc as required .				
a)	Group -A , up to 4 Mtrs .	2	Point		
b)	Group -B , Above 4 mtrs upto 6 mtrs	2	Point		
2)	wiring for circuit / submain wiring alongwith 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 *2.5 sq mm +1*2.5 sq mm for E.C.C	300	Metre		
b)	2 *4 sq mm +1*4 sq mm for E.C.C	20	Metre		
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	10	Metre		
b)	25 mm	10	Metre		
4)	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)	100 mm * 100 mm * 60 mm deep	2	Each		
b)	150 mm * 150 mm * 60 mm deep	2	Each		
c)	200 mm * 150 mm * 60 mm deep	2	Each		
5)	Supplying and fixing following sizes / modules ,GI box along with modular base & cover plate for modular switches in recess etc including Blanking plate as required .				
a)	3 Module (100 mm X 75 mm)	56	Each		
b)	6 Module (200 mm X 75 mm)	8	Each		
c)	12 Module (200 mm X 150 mm)	20	Each		
6)	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required .				
a)	5 /6 amps switch	144	Each		

b)	3 pin 5 /6 amps socket outlet	8	Each		
c)	15 /16 amps switch	32	Each		
d)	6 pin 15 /16 amps socket outlet	32	Each		
e)	2 modular electronic stepped type fan regulator	52	Each		
Rupees in words					

Make;

PVC pipe:- (Medium guage) Precision / pesto plast

Modular Switch/Socket/Regulator/pvc Box,GI Box :-Legrand
(Myrius)Crabtree Thames platium range /MK
(Wraparound)

MCB :-Legrand ,Siemens ,Schneider.

DB :- Legrand ,Seimens ,Schneider.

Ceiling Rose ,Holder :- 3 pin Anchor make /SSK.

N.B :- All materials to be used before prior approval of site incharge.

GENERAL SPECIFICATION AND CONDITIONS

1. The work shall be carried out as per National Code or P.W.D. specifications for works at West Bengal or other wise as specified in the Schedule of Quantities for the works.
2. The rates on percentage quoted by the contractors shall be for all leads, lifts, depth etc. unless otherwise specified in the schedule of quantities attached to agreement.
3. 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 the revised instruction and /OR modified drawing.
4. The brick shall be second class and / or first class bricks or a specified in the schedule of quantities and shall be of local best available size. To use first class brick only for construction of feeder pillar foundation.
5. All the materials such as stone chips, Sand pipes and other materials to be used in the work shall have to be approved by the Engineer-in-Charge not below the rank of Assistant Engineer.
6. No pipe line shall be covered until the same has been approved by the Engineer-in-Charge.
7. All charges for the Municipal fees and other taxes that may be payable as per local Municipal rules be paid by the contractors and his rates for such items shall be inclusive of all such charges. Nothing extra will be paid on this account by the department.
8. 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.
9. After laying of cable in underground the trench must be strictly mended and duly rammed with a rammer or rolled with a roller.
10. The fences damaged while digging the trench in individual quarters must be mended using barbed wire and bamboo or concrete pillars.
11. All G.I. items mentioned in the entire tender should be or hot dipped galvanization.
12. All light brackets are to be made first as specified in the tender and then hot dipped galvanizations are to perform. No cracks are acceptable on brackets.
13. Empty cable drums are to be deposited to the Section or Store as desired by Site-in-Charge.
14. Any item used while execution of the work, should be duly approved by the department.
15. 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. Currently the minimum wage as per G.O.I norms is Rs.283/- which must be followed.
16. The Site Supervisors should possess supervisory competency certificate and the Electricians should have proper work permits.
17. Safety of materials issued by the Department to the Contractor is the contractors' responsibility.
18. 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.