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INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR  
KHARAGPUR, WEST BENGAL 721302

TENDER DOCUMENT

*for*

Renovation of attached laboratory of Thermodynamics  
lab of Mechanical Engineering Department at IIT  
Kharagpur.

NIT No. IW/CE/NIT/1920/010

Tender Serial No. \_\_\_\_\_ Issued to:

.....  
.....  
.....



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## 1. NOTICE INVITING TENDER

### 1.1. INTRODUCTION

Indian Institute of Technology (IIT) Kharagpur, hereinafter called IITKGP, invites sealed tenders from the eligible contractors for **Renovation of attached laboratory of Thermodynamics lab of Mechanical Engineering Department at IIT Kharagpur**. Particulars of the project are as following.

### 1.2. PARTICULARS

1.NIT Number	NIT No. IW/CE/NIT/1920/010
2.Name of Work	Renovation of attached laboratory of Thermodynamics lab of Mechanical Engineering Department at IIT Kharagpur.
3.Location of Work	Mechanical Engineering Department
4.Estimated Cost(including GST)	₹ 39,21,407/- (Rupees Thirty Nine Lakhs Twenty One Thousand Four Hundred and Seven Only)
5.Earnest Money Deposit	₹ 78,430/- (Rupees Seventy Eight Thousand Four Hundred and Thirty Only)
6.Time Limit for Execution	120 days from Date of Start.
7.Tender Basis and Mode	Two stage (Technical Bid & Financial Bid)
8.Mode of Payment to IITKGP (EMD)	Demand Draft / Pay order in favour of IIT Kharagpur payable at Kharagpur.
9.Date, Time & Venue of Pre-bid Meeting	23 May 2019, 15:00 hrs, CCM Meeting Room, 1 <sup>st</sup> Fl, Old Bldg., IIT Kharagpur, Kharagpur-721302
10.Closing Date & Time for Receipt of bids	28 May 2019 upto 15:00 hrs
11.Date& Time for Opening of Technical Bid	28 May 2019 at 15:30 hrs
12.Date& Time for Opening of Price Bid	To be intimated to the eligible bidders subsequently.
13. Engineer-in-charge and contact details.	<b>For Civil works:</b> Mr. S.K. Biswas , Sr.Executive Engineer, Tel: 03222-282580, Mobile:7407139556 Email: <a href="mailto:skbiswas@adm.iitkgp.ac.in">skbiswas@adm.iitkgp.ac.in</a> <b>For Elec. Works:</b> Mr. S. Ghosh, Sr. Executive Engineer (E&M), Tel: 03222-282534 Mobile No.9434369369, Email: <a href="mailto:sgghosh@hijli.iitkgp.ac.in">sgghosh@hijli.iitkgp.ac.in</a>
14. Address for tender issue, submission and opening	Office of SE(C), 1 <sup>st</sup> Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302
15.Website for full and updated information	<a href="https://eprocure.gov.in/cppp/tendersearch;">https://eprocure.gov.in/cppp/tendersearch;</a> <a href="http://www1.iitkgp.ac.in/topfiles/tenders.php">http://www1.iitkgp.ac.in/topfiles/tenders.php</a>

### 1.3. ELIGIBILITY CRITERIA

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



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

**Note:**

- (i) The estimated cost is ₹ 39,21,407/- (Rupees Thirty Nine Lakhs Twenty One Thousand Four Hundred and Seven Only)
- (ii) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last date of receipt of applications for tender.
- (iii) **Similar works shall mean:** Repair & Renovation/ Construction of Building / Other civil structures including electrical works.

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

1.3.4. Electrical works shall be executed by selected bidder through agency holding electrical license and electrical supervisor license valid during the execution phase.

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

1.3.6. Average annual turnover of the bidder as per ITCC or profit & loss statement shall not be less than 30% of the estimated cost, not having incurred loss in more than two years, during last 5 years ending 31 Mar 2018.

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

Sd/-

Chief Engineer

On behalf of the **Director, Indian Institute of Technology Kharagpur**

**Copy to:**

- 1) Registrar
- 2) SE(E&M/Civil)
- 3) Senior Executive Engineer (Civil/ E&M)
- 4) Executive Engineer (Civil/E&M)
- 5) Assistant / Junior Engineer (Civil/ E&M)
- 6) Notice Board
- 7) Office file



## 2. INFORMATION TO BIDDERS

### 2.1. SCOPE OF WORK

- 2.1.1. The IITKGP intends for Renovation of attached laboratory of Thermodynamics lab of Mechanical Engineering Department at IIT Kharagpur. The work consists of comprehensive repair, renovation and modification of existing civil, plumbing sanitary and electrical systems
- 2.1.2. Constraint: The job needs to be executed in Department/office area without causing any disturbances to the normal functioning of remaining offices/classes/other departments.
- 2.1.3. The vendor shall work out execution sequence and methodology so as to complete the project within the envisaged time and the estimated cost, duly handling the constraint mentioned above.

### 2.2. GENERAL INSTRUCTIONS

- 2.2.1. Bidding documents are to be obtained electronically through websites: <https://eprocure.gov.in/cppp/tendersearch>; <http://www1.iitkgp.ac.in/topfiles/tenders.php>.
- 2.2.2. This bid document shall be read in conjunction with GCC (General Conditions of Contract) available on <http://www1.iitkgp.ac.in/topfiles/tenders.php>.
- 2.2.3. The bidder shall visit and inspect the site and obtain all information on his own responsibility and at own cost, which may be necessary for the purpose of quoting and submitting the tender. No excuse or ignorance as to site conditions and local information shall be accepted after awarding of the contract. Access to the site will be granted by the Engineer-in-charge on all working days within working hours.
- 2.2.4. IITKGP shall not provide any space at site for labour hutments.
- 2.2.5. All clarifications about the tender shall be sought by bidder on or before pre-bid meeting. The bidders may make suggestions which shall be considered during the Pre Bid Meeting. Intending bidder(s) may also send their queries or suggestion, if any, through e-mail to the Engineer-in-charge on [skbiswas@adm.iitkgp.ac.in](mailto:skbiswas@adm.iitkgp.ac.in) and [sghosh@hijli.iitkgp.ac.in](mailto:sghosh@hijli.iitkgp.ac.in) on or before **May 23 May 2019, 02.30PM**. No queries shall be entertained after notification of replies to noteworthy queries received till the date of pre-bid meeting.
- 2.2.6. Completion certificate issued by Competent Authority will only be considered as credential. If the Completion certificate issued by Competent Authority does not reflect the type of work, then Final bill / Schedule of Quantity of the qualifying works also to be attached along with the Completion certificates. Certificate from private individuals / organizations for whom such works have been executed shall not be accepted.
- 2.2.7. The bidding document (consisting of specifications, the schedule of quantities of various types of items to be executed, the set of terms and conditions of the contract and other documents / drawings, if any), Corrigenda, Clarifications to Pre-bid queries can be downloaded from the websites: <https://eprocure.gov.in/cppp/tendersearch>; <http://www1.iitkgp.ac.in/topfiles/tenders.php>. Corrigenda, if any shall be published only on these websites. The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason whatsoever.
- 2.2.8. All costs, charges & expenses that may be incurred in connection with the preparation of his tender shall be borne by him and the Institute accepts no liability whatsoever therefore.
- 2.2.9. Rates quoted by the bidders shall be inclusive of GST (Goods and Services Tax - Central, State and Interstate) and all applicable taxes. Income Tax and all other statutory deductions like labour cess etc. will be deducted from the bill as per prevailing rules.
- 2.2.10. Exemption to IITKGP against any tax/ duty/ fee/ surcharge/ charge/ cost, if any, found applicable or sought later from IITKGP after award shall be passed on to IITKGP by the contractor without dispute.
- 2.2.11. IITKGP reserves the right to reject any or all of the bids without assigning any reason.
- 2.2.12. **Bid Validity:** Bid shall remain valid for 120 days from the date of submission.
- 2.2.13. **Firm Price:** Bidder's quoted Rates/Prices for executing the activities under the Contract shall remain firm till completion of the entire work & shall not attract any escalation under any circumstances whatsoever.



- 2.2.14. If any information furnished by the bidder is found as false / fabricated, then his bid will be rejected and treated as cancelled. Even if such manipulation is detected at any stage after signing of the contract, it would lead to termination of the contract besides forfeiture of Earnest Money Deposit and liabilities towards prosecution. In such cases the bidder will be debarred from participation in future tendering process in IITKGP for next 05 (Five) years.
- 2.2.15. **Earnest Money Deposit (EMD)** of requisite amount and that in prescribed mode or proof of payment thereof shall be enclosed with the Technical Bid explained in following section.
- 2.2.16. **Refund / Conversion of Earnest Money Deposit:** The Earnest Money received shall be refunded to the unsuccessful bidders without any interest upon executing the Contract Agreement by successful bidder. The Earnest Money Deposit of successful bidder shall be retained and converted into part of Security Deposit.
- 2.2.17. **Forfeiture of Earnest Money Deposit:** Earnest Money Deposit will be forfeited in any of the following cases:
- (i) The bidder withdraws / modifies his tender during the period of Bid Validity.
  - (ii) The bidder, in case of tie between lowest bids, refuse to submit revised offer.
  - (iii) The bidder does not accept the correction of arithmetical errors of his tender.
  - (iv) The bidder fails to deposit Performance Guarantee and information as per format given in GCC within the stipulated time period before award of the work.

### 2.3. SUBMISSION OF TENDER

- 2.3.1. The sealed tenders shall be received at the Office of SE(C), 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302, up to 15:00hrs, **28 May 2019** or Corrigenda otherwise.
- 2.3.2. Tenders received after the due date and time shall not be considered.
- 2.3.3. Tenders shall be submitted in a sealed Master envelope super scribed "**Renovation of attached laboratory of Thermodynamics lab of Mechanical Engineering Department at IIT Kharagpur**" with the NIT No. **IW/CE/NIT/1920/010**, containing three separate sealed covers, each clearly super scribed as "**EMD**", "**Technical Bid**" and "**Financial Bid**" respectively, in the following manner:

- 2.3.4. **Envelope-1 (EMD)** will consist of:

- i) **Earnest Money Deposit** of requisite amount, in the prescribed mode or proof of payment thereof.

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

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

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

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

### 2.4. EVALUATION OF BIDS AND AWARD OF WORK

- 2.4.1. The Bid of bidder will be opened on the specified date and time of opening at the Office of SE(C), 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302 in the presence of willing bidders or their authorized representatives.
- 2.4.2. Date, time and place of opening of Financial Bid will be informed after evaluation of Technical Bid to the Technically Qualified Bidders.
- 2.4.3. Bids shall, first, be checked for payment of **Earnest Money Deposit**. Only those bids found to have duly paid/ submitted Earnest Money Deposit shall be considered for evaluation.



- 2.4.4. Evaluation of **Technical Bid**: The bids received will then be assessed on the eligibility criteria mentioned at Para1.3 of Notice Inviting Tender. Bids found not meeting the eligibility criteria shall be considered non-responsive and shall be rejected summarily.
- 2.4.5. IITKGP retains the right to revert back to individual bidders with further clarifications / queries on the Technical Bid. The bidder has to respond to the queries within the specified time mentioned in the covering letter.
- 2.4.6. On the date & time specified for opening of Financial Bid or the Revised Financial Bids as the case may be will be opened on specified date and time.
- 2.4.7. **EVALUATION OF Financial Bids**: The Financial Bid should contain the complete bid document with duly filled in Schedule of Financial Quote. Financial Bids opened as above will be checked for arithmetical errors.
- 2.4.8. The successful bidder shall be issued Letter of Acceptance (LOA) of the bid, and be required to furnish a Performance Guarantee as per General Conditions of Contract, Program Schedule with specific Milestones to be achieved as to complete the work within the stipulated time limit and details of his Technical Staff to be deployed as per ANNEXURE-I
- 2.4.9. **Letter of Award (Work Order)** shall be issued to the successful bidder only after receipt of the Performance Guarantee, along with Program Schedule and the details of Technical Staff to be deployed for the work.
- 2.4.10. **Agreement (Contract)** consisting of complete tender document including conditions, bill of quantities, technical proposal and specialized services, drawings, if any, and acceptance thereof together with any correspondence leading thereto, shall be drawn and signed with the awardee after issue of Work Order.
- 2.4.11. **Date of start** of work shall be reckoned from 7<sup>th</sup> day from the date of issue of "Letter of Acceptance".

## 2.5 Complaints Handling:-

- 2.5.1 All maintenance complaints shall be got addressed by the contractor to the satisfaction of Engineer-in-charge within 3 days from the date of issuance of the "Job Card" from IIT Kharagpur.
- 2.5.2 Complaints requiring completion time more than 3 days shall be responded specifically by the contractor with the scheme, in consultation with Engineer-in-charge, and timeline for compliance, to the Engineer-in-charge within 3 days from the date of issuance of the "Job Card".
- 2.5.3 Any complaint left unattended by the contractor beyond 3 days without specific reasons on record shall attract levy of penalty of Rs.50/- per complaint per day from 4th day to 7th day and Rs.100/- per complaint per day thereafter recoverable from dues to the contractor.





### 3. UNDERTAKING BY THE BIDDER

#### U N D E R T A K I N G

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

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

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

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

I / We hereby declare that I / We shall treat the tender documents, 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.

**Seal & Signature of Contractor**

Postal Address

Dated

Witness

Address

Occupation



## ANNEXURE-I

**TECHNICAL STAFF OF CONTRACTOR**

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

Seal &amp; Signature of Contractor



**INSTITUTE WORKS**  
**IIT KHARAGPUR**

**Name of Work:** Renovation of attached laboratory of Thermodynamics Lab of Mechanical Engineering  
Department at IIT Kharagpur.

**Part A - Civil Works**

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
1	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	3.00	1754.04	5 262.12
2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix).	cum	17.00	1202.34	20 439.78
3	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.In cement mortar.	cum	30.00	1016.27	30 488.10
4	a) Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil.	cum	105.00	200.66	21 069.30
	b) Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	100.00	151.64	15 164.00
5	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	70.00	1106.71	77 469.70
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to any level.				
	1:3:6 (1 Cement : 3 coarse sand (zone-III):6 graded stone aggregate 40 mm nominal size).	cum	60.00	5805.87	3 48 352.20
7	Brick work with clay fly ash F.P.S. (non modular) brick of class designation 7.5 in superstructure above plinth level up to floor five level in :Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	110.00	6353.95	6 98 934.50
8	15 mm cement plaster on brick wall of mix:1:6 (1 cement: 6 sand)	sqm	590.00	223.33	1 31 764.70
9	Neat cement punning.	sqm	395.00	51.37	20 291.15
10	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete.40 mm thick with 20 mm nominal size stone aggregate.	sqm	400.00	437.26	1 74 904.00
11	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	11200.00	81.52	9 13 024.00

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
12	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length up to 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete up to any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	710.00	663.73	4 71 248.30
13	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	230.00	669.58	1 54 003.40
14	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators, side /top /centre hung, with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted, including providing and fixing of hinges, pivots, including priming coat of approved steel primer, but excluding the cost of other fittings, complete all as per approved design, (sectional weight of only steel members shall be measured for payment).Fixing with 15x3 mm lugs 10 cm long embedded in cement concrete block 15x10x10 cm of C.C. 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	kg	980.00	136.99	1 34 250.20
15	Providing and fixing glass panes, with putty and nails wherever necessary including racking out the old putty. Float glass panes of thickness 4 mm.	sqm	54.00	769.24	41 538.96
16	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete.250 mm weighing not less than 150 gms.	each	24.00	32.38	777.12
17	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete :100 mm.	each	24.00	27.31	655.44
18	Supplying profiles of required section made of Aluminium Alloy Extrusions conforming to IS: 732-1983 and IS: 1285- 1975; Anodized (with required film thickness and specified colour / natural) matt finished conforming to IS: 1868-1983 for fabrication of composit door, sliding & casement windows, partitions, formed of basic sections of any ISI embossed / certified make and brand as per direction of Engineer - In- Charge. (Payment will be made on finished length of the work). In 10-12 Micron thickness Anodizing film. Natural white. Louvered window.				
	i) Top, bottom and side member.	Metre	101.00	218.10	22 028.10
	ii) Louvered Section.	Metre	101.00	784.20	79 204.20
	iii) Cleat angle ( Non-anodized).	Metre	101.00	313.44	31 657.44

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
19	Distemping with 1st quality acrylic distemper, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	Two coats.	Sqm	250.00	59.87	14 967.50
20	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :Water thinnable cement primer.	Sqm	350.00	44.56	15 596.00
21	Finishing walls with Acrylic Smooth exterior paint of required shade:				
	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	150.00	54.69	8 203.50
22	Applying priming coat:				
	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	Sqm	630.00	35.09	22 106.70
23	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.				
	Two coats	Sqm	630.00	90.44	56 977.20
24	Taking out carefully G.C.I. or C.I. or asbestos sheets (including ridges etc.) from roof or wall after unscrewing bolts, nuts, screws etc.and stacking the material at site as directed.	Sqm	710.00	48.86	34 690.60
25	Providing and fixing fly proof galvanized M.S. wire gauge to windows and clerestory windows using wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm all complete.				
	With 12 mm mild steel U beading	Sqm	25.00	719.92	17 998.00
26	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	cum	150.00	145.37	21 805.50
27	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level ,1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size).	cum	20.00	7495.09	149901.80
28	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto any level.Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	3.00	68.25	204.75
29	Centering and shuttering including strutting, propping etc. and removal of form for all heights.	sqm	300.00	233.88	70164.00
			Total Amount = Rs.		35 84 871.71
			<b>Part-A</b> Say, Rs.		35 84 872.00

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
<b>Part B - Electrical Works</b>					
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, 1.1 kV, FRLS PVC insulated copper conductor single core cable etc as required . <b>Make ( FRLS Wire):-</b> Finolex/RR Kabel/Polycab/Havells/KEI/Equivalent approved by Engineer-in Charge <b>Make (Switch,Socket,Blank plate etc):-</b> Crabtree Athena range/Wipro Nova/Legrand Myrius range/MK (Wraparound Plus)/Equivalent approved by Engineer-in Charge <b>Make ( MMS Pipe):-</b> Prestoplast/Precision/AKG/Equivalent approved by Engineer-in Charge				
a)	Upto 6 metres.	Point	15	717.00	10755.00
b)	Above 6 metres .	Point	15	783.00	11745.00
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 . <b>Make ( FRLS Wire):-</b> Finolex/RR Kabel/Polycab/Havells/KEI <b>Make ( MMS Pipe):-</b> Presto plast/Precision/AKG/Equivalent approved by Engineer-in Charge				
a)	2 X 2.5 sq mm + 1 X 2.5 sq mm for E.C.C	Mtr.	97	167.00	16199.00
b)	2 X 4 sq mm + 1 X 4 sq mm for E.C.C	Mtr.	78	200.00	15600.00
c)	2 X 6 sq mm + 1 X 6 sq mm for E.C.C	Mtr.	45	249.00	11205.00
d)	4 X 6 sq mm + 2 X 6 sq mm for E.C.C	Mtr.	82	394.00	32308.00
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. <b>Make (MMS Pipe):-</b> Presto plast/Precision/AKG/Equivalent approved by Engineer-in Charge				
a)	20 mm	Mtr.	5	84.00	420.00
b)	25 mm	Mtr.	5	90.00	450.00
4	Supplying and fixing following sizes / modules ,GI box along with modular base & cover plate for modular switches in recess etc as required . <b>Make:-</b> Crabtree Athena range/Wipro Nova/Legrand Myrius range/MK (Wraparound Plus)/Equivalent approved by Engineer-in Charge				
a)	3 Module	Each	1	267.00	267.00
b)	6 Module	Each	15	333.00	4995.00
c)	12 Module	Each	1	434.00	434.00
5	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required . <b>Make:-</b> Crabtree Athena range/Wipro Nova/Legrand Myrius range/MK (Wraparound Plus)/Equivalent approved by Engineer-in Charge				
a)	5 /6 Amps Switch	Each	15	85.00	1275.00
b)	15 /16 Amps Switch	Each	15	132.00	1980.00

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
c)	3 pin 5 /6 Amps Socket Outlet	Each	15	111.00	1665.00
d)	6 pin 15 / 16 Amps Socket Outlet	Each	15	175.00	2625.00
6	Supplying & fixing of <b>LED Flood Light</b> type fittings,Aluminium die cast housing with glass cover, Surge protection > 4kV,240 Volt,Lumen ≥ 3000,Efficacy ≥ 100 Lm/Watt,CRI ≥ 70,pf ≥ 0.95 THD ≤ 10,CCT ≥ 5700 K,IP- 65 on angle iron frame fixed on rail poles,walls etc as directed by the EIC.All the luminaires should be warranted for 5 years at site with free of cost.Permanent numbering of LED luminaires are mandatory during installation at site. Make:-Havells/Philips/Bajaj/Jaquar/Equivalent approved by Engineer-in Charge	Each	26	2570.40	66830.40
7	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	1	168.00	168.00
8	Supplying & fixing of <b>Outdoor Luminaires</b> LED type fittings,240 Volt,Lumen ≥ 2500,Efficacy ≥ 100 Lm/Watt,CRI ≥ 70,pf ≥ 0.95 THD ≤ 10,CCT ≥ 5700 K,IP- 65.on angle iron frame fixed on rail poles,walls etc as directed by the EIC. All the luminaires should be warranted for 5 years at site with free of cost.Permanent numbering of LED luminaires are mandatory during installation at site. <b>Make:-</b> Havells/Philips/Bajaj/Jaquar/Equivalent approved by Engineer-in Charge	Each	6	2396.40	14378.40
9	Fixing only outdoor / street light type fluorescent light fitting complete with all accessories to be fixed/projected from the wall of the building incl. making holes to building, S&F 40 mm dia. GI pipe(ISI-Medium) 1.50 mts. average length, with GI socket at one end and thread at the other end & suitable bend to house the fitting & making necy. connections with S&F necy. length of 3 X1.5 sq mm FRLS PVC insulated single core copper wire and making connections as required and mending good damages to wall & painting.( Materials Department Supply)	Each	1	722.00	722.00
10	Supplying of 1.1 kV grade, XLPE insulated overall PVC sheathed stranded aluminium conductor flat steel strip armoured cable. Confirming to IS:7098 part-I (A2XFY) 1988 with latest amendments. <b>Make:-</b> Havells/Gloster/Nicco/RPG/KEI/Equivalent approved by Engineer-in Charge				
a)	<b>4 Core 10 sq.mm</b>	Mtr.	50	116.47	5823.50
b)	<b>2 Core 10 sq.mm</b>	Mtr.	50	89.21	4460.50
11	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on <b>Wall Surface</b> as required incl. S+F of 1 X 10 SWG GI wire for E.C.C making holes and mending good the damages to original finish incl painting.( Cable Dept supply)				
a)	Upto 35 sq mm (clamped with 1 mm thick saddle)	Mtr.	15	39.00	585.00
12	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on <b>Cable Tray</b> along with S+F of 10 SWG GI wire as earth wire as required.				
a)	Upto 35 sq. mm (clamped with 1mm thick saddle @ 3 sets per metre.)	Mtr.	30	33	990.00

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
13	Laying of cable as below after <b>Cutting Floor/Pavement/Wall</b> 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 1 X 10 SWG wire for ECC (Cable Dept Supply)				
a)	From 2.5 sq mm to 35 sq mm at an average depth of 75 mm in floor/pavement/wall etc.	Mtr.	15	127.00	1905.00
14	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size in the existing <b>Masonry Open Duct</b> incl mending good the damages to original finish. (Cable Dept Supply). This includes S+F 10 SWG GI earth wire for cables.				
a)	Upto 35 sq mm .	Mtr.	25	23.00	575.00
15	Supplying and making <b>End Termination</b> 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. <b>Make:-</b> ARUN/Dowells/Equivalent approved by Engineer-in Charge				
a)	2 X 10 sq mm	Each	2	198.00	396.00
d)	4 X 10 sq mm	Each	2	219.00	438.00
16	Earthing with perforated <b>GI Earth Pipe 4.5 mtr</b> long, 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc for any type of soil (Morrumed/boldered soil). with charcoal/coke,salt and also pouring of shifted loose soil as required and as instructed by the EIC. <b>Make (Pipe):-</b> GI Pipe TATA (Medium) /Bansal (Medium)/Jindal (Medium)/Equivalent approved by Engineer-in Charge	Each	4	5308.00	21232.00
17	5.4 Earthing with G.I. Earth Plate 600 mm X 600 mm X 6 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	2	6216.00	12432.00
18	Providing and fixing <b>25 mm X 5 mm</b> G.I. strip on surface or in recess for connections etc. as required.All Joints should be done after 4"over lapping of the strips and by welding only.	Mtr.	60	206.00	12360.00
19	Supplying and Fixing <b>Earth Busbar of G.I.Flat 25 mm X 6 mm</b> on wall having clearance of 6 mm from wall incl. providing drilled holes on busbar complete with G.I. blots, nuts, washers, spacing heavy duty insulators etc as required.	No	2	156.00	312.00
20	Providing and fixing Hot dipped <b>6 SWG dia GI wire</b> on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required for GI pipe earthing & others.	Mtr.	20	37.00	740.00
21	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. <b>Make:-</b> Medium size TATA/Bansal/Jindal/Equivalent approved by Engineer-in Charge				
a)	25 mm	Mtr.	15	173.00	2595.00
b)	40 mm	Mtr.	15	246.00	3690.00



Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
22	Supplying and fixing <b>DP</b> sheet steel Enclosure on surface/recess along with <b>25/32 Amps</b> ,415 V "C" curve DP MCB complete with connection, testing and commissioning etc.as required. <b>Make:-</b> Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge	Each	2	848.00	1696.00
23	Supplying and fixing <b>TPN</b> sheet steel Enclosure on surface/recess along with <b>16/25/32 Amps</b> ,415 V "C" curve TPN MCB complete with connection, testing and commissioning etc.as required. <b>Make:-</b> Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge	Each	4	1146.00	4584.00
24	Fixing only 240V SPN/415V TPN Sheet Steel Main Switch or DP/TP/FP sheet steel enclosure or SP/TP Industrial Plug,Socket directly on surface / recessed /on flat iron legs on wall along with required DP/TP/FP MCB including necessary connection, testing as required. (Enclosure/Main switch / Industrial Socket : Department supply ).	Each	5	130.00	650.00
25	Supplying and fixing following way, <b>Single Pole and Neutral</b> , IP- 43, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) <b>Make:-</b> Legrand/Hager/L&T/Equivalent approved by Engineer-in Charge				
a)	<b>8 Way</b> , Double door	Each	1	1760.00	1760.00
b)	<b>12 Way</b> Double door	Each	1	2053.00	2053.00
26	Supplying and fixing of following ways surface/ recess mounting, <b>Vertical type</b> ,IP-43, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 Amps, tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TP DB is normally used where 3 phase outlets are required.) Make:-Legrand/L&T/Hager/Equivalent approved by Engineer-in Charge				
	4 Way (4 + 12), Double door	Each	1	5651.00	5651.00
27	Fixing of followings directly on surface / recessed /on flat iron legs on wall including necessary connection as required. ( DBs/ switch fuse unit : Department supply ).				
a)	<b>SPN</b> MCB DB (4 to 16 way)	Each	2	178.00	356.00
b)	<b>TPN</b> MCB DB (4 to 12 way)	Each	2	230.00	460.00
28	Supplying and fixing <b>5 Amps to 32 Amps</b> rating, 240/415 V,10 kA, "C" curve,miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. <b>Make:-</b> Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge				
a)	<b>Single Pole</b>	Each	15	199.00	2985.00
b)	<b>Double Pole</b>	Each	2	556.00	1112.00
c)	<b>Triple Pole</b>	Each	4	826.00	3304.00
d)	<b>Triple Pole and Neutral</b>	Each	2	1092.00	2184.00

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
29	Supplying and fixing <b>40 Amps to 63Amps</b> rating, 240/415 V,10 kA,“C” curve, Miniature Circuit breaker suitable for inductive load of following poles in the existing MCB DB or in enclosure complete with connections, testing and commissioning etc. as required. <b>Make:-</b> Legrand (4085 98/4086 39/4086 61/4087 02)/Hager/L&T/Siemens/Schneider/ Equivalent approved by Engineer-in Charge				
a)	<b>Single Pole</b>	Each	1	411.40	411.40
b)	<b>Double Pole</b>	Each	1	825.40	825.40
c)	<b>Triple Pole</b>	Each	1	1241.80	1241.80
d)	<b>Four Pole</b>	Each	1	1565.80	1565.80
30	Supplying and Installing following size of perforated painted with powder coating M.S.cable trays <b>STRAIGHT THROUGH</b> with perforation not more than 17.5%, in convenient sections, jointed with connectors, suspended from the ceiling/fixed on wall with angle/vertically fixing agaist rail pole by welding iron angle on rail pole with M.S.Suspenders including bolts & nuts, Painting suspenders etc as required. <b>Make:-</b> Lagrand/MK/OBO/Profab /Substantially equivalent				
a)	100 mm width X 50 mm depth X 1.6 mm thickness	Mtr.	28	476.00	13328.00
31	Supply & Fixing of 6 mm Electrically Insulated Sheet (6 mm Bakelite Sheet)	Kg	10	153.40	1534.00
32	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	Each	2	448.00	896.00
33	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required. <b>(For Horizontal Run)</b> .All joints shall be done by welding only after 4" to 6" over lapping of the GI tape.The laying of GI strip for Horizontaltal run and Vertical run should be laid on suitable Porceline Insulators suitably fixed on iron structure to avoid any direct contact of the strips to the metallick structure.	Mtrs.	60	104.00	6240.00
34	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required. <b>(For Vertical Run)</b> .All joints shall be done by welding only after 4" to 6" over lapping of the GI tape.The laying of GI strip for Horizontaltal run and Vertical run should be laid on suitable Porceline Insulators suitably fixed on iron structure to avoid any direct contact of the strips to the metallick structure.	Mtrs.	57	163.00	9291.00
35	Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I.strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	Nos.	5	102.00	510.00
36	Providing and laying G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.All joints shall be done by welding only after 4" to 6" over lapping of the GI tape.	Mtrs.	48	176.00	8448.00
37	Hiring charges for scaffolding arrangement including dismantling at the end of work and carriage, for LC installation of overhead reservoir (vertical run)	Mtrs.	30	62.00	1860.00

Sl. No.	Description of items	Unit	Qty	Rate (Rs.)	Total Amount(Rs.)
38	Dismantling of Light Fitting / Fans / SPN DB/ TPN DB/Main Switch /Main Supply Panel /existing old wiring,cable etc and shifting to site store including mending good damages to original finish.				
a)	Light Fitting/Celling Fan/Wall Fan/Exhaust Fan/Industrial plug & Socket DB/Metal Enclosure etc.	Each	5	35.00	175.00
b)	TPN DB/SPN DB/Main Switch etc.including accessories & old cable/Wiring	Each	5	69.00	345.00
c)	Medium Size main supply Panel etc. including accessories & old cable/Wiring	Each	1	513.00	513.00
Total Amount					336535.20
				<b>Part-B</b>	Say, Rs. <b>336535.00</b>
<b>Total Amount (Part A + Part B)</b>					<b>39 21 407.00</b>
<b><i>(Rupees Thirty Nine Lakhs Twenty One Thousand Four Hundred and Seven only)</i></b>					
I agree to execute the work at _____ % [ in figure] ABOVE / BELOW / AT PAR ( _____ percent) [in words] ABOVE / BELOW/AT PAR Department estimated amount/item rates.					
_____ Signature of the Contractor with Date & Seal					

**Note: For Electrical Works**

- 1) All materials to be used after prior approval of Engineer in charge.
- 2) All electrical work includes dismantling of old items in respective area and depositing them to the store with proper documentation
- 3) Copper Socketing above 4 sq.mm size are required for all end terminations with copper wire.These are to be strictly followed.
- 4) No twisting joints are allowed in any cases.Suitable connectors/Ceiling roses are to be used in switch/ Power Boards and ceiling rose
- 5) Laying of conduits on false ceiling are not allowed,the conduits are to be laid on wall/ceiling for connection to the points on false ceiling
- 6) Suitable glanding of the cables are to be done for cable end terminals brass.
- 7) G.I anti rust screws are to be used during fixing of pipes,cables conduits light fittings etc. on wall.
- 8) Valid challans and test/Certificates of all the materials supplied by the contractor are to be submitted before execution of work.