

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.



## INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR, WEST BENGAL

### TENDER DOCUMENT FOR

Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

#### PART – I : TECHNICAL BID

NOTICE INVITING TENDER NO. : SE(C)-IIT-TEN-2017-18\_09  
DATED : 07.04.2017

APRIL 2017

Cost of Tender Document : Rs. 1000.00 (Non-Refundable)  
Last Date & Time of Submission : 20.04.2017, upto 3:00 pm

CIVIL CONSTRUCTION & MAINTENANCE SECTION  
IIT, KHARAGPUR,  
WEST BENGAL

योग: कर्मसु कौशलम्  
SUPERINTENDING ENGINEER (CIVIL)  
IIT KHARAGPUR

Name of Bidder : M/S.....

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Issued on: .....

CCM Tender Sl. No. \_\_\_\_\_

Dated \_\_\_\_\_

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

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**INDIAN INSTITUTE OF TECHNOLOGY  
KHARAGPUR**

No. SE(C)-IIT-TEN-2017-18\_09

Date: 07.04.2017

**NOTICE INVITING TENDER**

The Superintending Engineer (Civil), IIT Kharagpur, invites sealed Item Rate tenders under **Two part Bid System** containing Part-I (Technical Bid) & Part-II (Financial Bid) from the approved and eligible contractors of the Indian Institute of Technology, Kharagpur/CPWD/PWD/MES and other bonafide agencies meeting the minimum qualification criteria for the following work:

Name of work	Estimated Amount (Rs.)	Earnest Money Deposit (Rs.)	Time for Completion	Start Date & Time of Tender Document Download / Bid Submission	End Date & Time of Tender Document Download / Bid Submission	Date & Time of opening of Technical Bid
Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.	29,67,542.00	59,360.00	03 (Three) Months	07.04.2017 03:30 PM	20.04.2017 upto 03:00 PM	20.04.2017 at 3:30 PM

Cost of Tender Paper Rs. 1000.00, NON REFUNDABLE (in the form of DD only) in favour of **IIT Kharagpur**, payable at **Kharagpur** (validity of DD should be at least 03 months) is to be submitted along with the tenders (within Technical Bid). Tender without 'Cost of Tender Document' will be summarily rejected.

The Earnest Money should be deposited along with the tenders (within Technical Bid) in the form of DD only in favour of IIT Kharagpur, payable at Kharagpur. Tender without 'Earnest Money Deposit' will be summarily rejected.

**Brief Scope of Work**

**The work to be executed at the students Halls of Residence, according to a strict time schedule and front availability.**

The work comprises of –

1. Civil, Sanitary & Plumbing Works (Major Component), approximately 88% of total work value
2. Electrical Works (Minor Component), approximately 12% of total work value

**Eligibility Criteria**

Contractors who fulfill the following requirements shall be considered as eligible bidder.

Agencies should have satisfactorily completed the similar works as mentioned below during the last 07 (Seven) years ending last day of the March, 2017:

- i) Three (03) similar works each costing not less than 40% of estimated cost, or
- ii) Two (02) similar works each costing not less than 60% of estimated cost, or
- iii) One(01) similar work costing not less than 80% of estimated cost, executed under

Central/State Government Department / Central/State Autonomous Body / Central/State Public Sector Undertaking.

**Similar work shall mean: Construction / Repair & Renovation / Maintenance of Building.**

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 last date of applications for tenders.

**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.

*If the bidders has no experience for allied minor component, he must associate himself, with agencies eligible to bid for the minor component (Electrical works), individually in line with Eligibility Criteria mentioned above (i.e, 3 similar Electrical works each costing not less than 5% of estimated cost, or 2 similar Electrical works each costing not less than 7% of estimated cost, or 1 similar Electrical work costing not less than 9% of estimated cost). The contractor or the agency he associates with to carry out the electrical work shall have to produce valid license from the competent authority in his name. The validity of the license should remain for the whole tenure of the work. The same should be submitted along with the technical bid. The eligible bidders shall quote rates for all items of major component (Civil and Sanitary & Plumbing) as well as for all items of allied minor component (Electrical) of work.*

The tender 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) can be downloaded from the **Central Public Procurement Portal** of Government of India <https://eprocure.gov.in/cppp/tendersearch> & **Institute's website** <http://www1.iitkgp.ac.in/topfiles/tenders.php>. *The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason whatsoever. In case of any discrepancy between the tender documents downloaded from internet and the master copy available in this office, the letter shall prevail and will be binding on the tender(s). No claim on this account will be entertained.*

Tender should be submitted as per the prescribed format within the specified date and time at Office of Civil Construction & Maintenance Section, IIT Kharagpur, and failing to do so, the offer shall be summarily rejected. **Bid Validity period is 90 Days** from submission of bid. Bid will be opened at Civil Construction & Maintenance Section, IIT Kharagpur. **The Institute reserves the right to reject any tender without assigning any reason thereof.**

Superintending Engineer (Civil)  
On behalf of Indian Institute of Technology  
Kharagpur

Copy to:

- 1) Registrar,
- 2) Chairman (CC&M)
- 3) Vice Chairman (CC&M) Civil
- 4) Executive Engineer (Civil)
- 5) Engineer (Civil)
- 6) Asstt./Jr. Engineer (Civil)
- 7) Notice Board
- 8) Office file

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

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## **INSTRUCTIONS TO THE BIDDER**

1. Attention of the tenderer is directed to the conditions of tender and general conditions of contract of IIT Kharagpur. Bidders who are not aware of the "General Conditions of Contract" of IIT Kharagpur are instructed to collect the same from Civil Construction and Maintenance Section, IIT Kharagpur and read the terms & conditions before submission of the tender.
2. The tenderer 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. 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. Failure by the tenderer to have done all the things, which in accordance with his condition he is deemed to have done shall not relieve the successful tenderer of the responsibility for satisfactory completion of the work as required. If there is any clarification required, the tenderer shall submit the queries in writing 03 (Three) days before the last date & time of submission of the tender, to the Civil Construction & Maintenance Section, IIT Kharagpur. Access to the site will be granted, if necessary, to the tendered by prior permission of the Engineer-in-charge.
3. The time for completion of work is **03 (Three) Months** & will be reckoned from the 7<sup>th</sup> day from the date of issue of Work Order or handing over of site, whichever is earlier. The work to be executed according to a strict time schedule and front availability.
4. EMD of requisite amount as mentioned in NIT/Corrigenda in favour of **IIT Kharagpur** in the form of **Demand Draft** only from any **Nationalized Bank** payable at **Kharagpur** should be enclosed within the **Technical Bid**. Validity of DD should be at least 90 days from date of publication of NIT. Any tender received without requisite Earnest Money in the form as mentioned above shall be summarily rejected and treated as cancelled. The Earnest Money received shall be refunded to the unsuccessful bidders without any interest upon executing the Contract Agreement by successful tenderer, subject to the provisions of Clause 5 of ITB. The Earnest Money Deposit (EMD) of successful tenderer shall be retained and converted as part of Security Deposit.
5. Earnest Money Deposit (EMD) will be forfeited in the following cases -
  - a. If the tenderer withdraws / modifies his tender during the period of Bid Validity.
  - b. If the tenderer does not accept the correction of arithmetical errors of his tender.
  - c. If the tenderer after award of work, does not start the work within the stipulated time period as per Letter of Acceptance / Work Order.
6. **Eligibility Criteria**

Contractors who fulfill the following requirements shall be considered as eligible bidder.

Agencies should have satisfactorily completed the similar works as mentioned below during the last 07 (Seven) years ending last day of the March, 2017 :

- i) Three (03) similar works each costing not less than 40% of estimated cost, or
- ii) Two (02) similar works each costing not less than 60% of estimated cost, or
- iii) One(01) similar work costing not less than 80% of estimated cost, executed under Central/State Government Department / Central / State Autonomous Body / Central/State Public Sector Undertaking.

**Similar work shall mean: Construction / Repair & Renovation / Maintenance of Building.**

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 last date of applications for tenders.

**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.

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If the bidders has no experience for allied minor component, he must associate himself, with agencies eligible to bid for the minor component (Electrical works), individually in line with Eligibility Criteria mentioned above (i.e, 3 similar Electrical works each costing not less than 5% of estimated cost, or 2 similar Electrical works each costing not less than 7% of estimated cost, or 1 similar Electrical work costing not less than 9% of estimated cost). The contractor or the agency he associates with to carry out the electrical work shall have to produce valid license from the competent authority in his name. The validity of the license should remain for the whole tenure of the work. The same should be submitted along with the technical bid. The eligible bidders shall quote rates for all items of major component (Civil and Sanitary & Plumbing) as well as for all items of allied minor component (Electrical) of work.

## 7. Submission of Bid

The bids shall be submitted in **Two Parts** in two separate sealed envelopes:

### I. **Complete Technical Bid** will comprise of :

- i) EMD of requisite amount in the form of DD only in favour of IIT Kharagpur payable at Kharagpur. Bid without EMD would be summarily rejected.
- ii) Credential documents fulfilling the minimum eligibility criteria as per Clause 6 above, i.e., Experience Certificates for completion of similar type of job within last seven years.
- iii) Original Tender Document – Part-I: Technical Bid. (Stamped & Signed in all pages)
- iv) Statutory registration documents like Trade License, PAN, IT Return of last 3 years and other tax clearance Certificates, if any, etc.

### II. **Complete Financial Bid** will comprise of :

- i) Duly filled-up **Form of Tender** as an acceptance to the terms and conditions set in the tender.
- ii) Duly filled-up **Schedule of Quantities**.

Both the envelopes should be duly marked on top with **NIT Number, Name of work and Technical Bid / Financial Bid** as the case may be and both the envelopes to be submitted in another sealed envelope duly marked on top with **NIT Number and Name of work**.

Cost of Tender Paper Rs. 1000.00, NON REFUNDABLE (in the form of DD only) in favour of IIT Kharagpur, payable at Kharagpur (validity of DD should be at least 03 months) to be submitted along with the tenders (within Technical Bid). Tender without 'Cost of Tender Document' will be treated as cancelled. Tenders must be delivered at the place and time as indicated in NIT / further corrigenda. Bids that are not in the above format will be rejected.

8. All Rates, Prices, Amounts and Sums quoted by the bidder shall be in Indian currency only. The language used throughout shall be English.
9. All Rates, Amounts & Sums shall have to be quoted in indelible ink and written both in figures and words. If the rate quoted in words does not tally with the rate quoted in figures then the rate which corresponds to the lesser amount shall be considered.
10. Any overwriting / correction / applying correction fluid shall be avoided and in case any correction is made the same must be initialized and stamped.
11. Tender must be submitted with the rates for all the items of work involved and any incomplete tender will not be considered. The items for which the rates are not quoted will be considered as '**Zero**' & the agency shall complete that item of work without any claim.
12. No alteration shall be made by the tenderer in the tender and no conditional tender will be entertained. Tender with split rate will not be considered.
13. The bid shall remain valid for a period of **90 days** from the date of opening of the bid. If before expiry of the validity period or issue of work order, whichever is earlier, the bidder amends / modifies / withdraws his bid, making unacceptable to the institute, then the Earnest Money Deposit shall be liable to forfeiture at the option of the Institute.
14. The Rates quoted by the tenderer should be inclusive of all taxes & duties, freight, cost for loading & unloading etc. and must hold good till the completion of work and shall not be subjected to escalation due to increase in local market rates of materials and labour. No claim on this account what so ever shall be entertained at any stage including the extended period, if any.

## INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

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15. The tenderer shall have to submit copies of valid Trade License, PAN, Income tax and other statutory tax clearance Certificates, if any, along with the tender. The original copies of these Certificates will have to be produced when demanded for verification.
16. Each page of the bid document shall have to be signed and stamped by the Bidder / Authorised Signatory before submission. The bidders have to submit the tender documents and correspondences accompanying the tender with proper sign and stamp on each page along with the bid. The person / officer signing the tender / bid should be delegated with an appropriate **Power of Attorney (duly endorsed by a Notary Public)** by the **Owner / Proprietor / Partner / CEO / MD / Director** of the company to sign such documents.
17. The Intending bidders will have to produce documentary evidence in original in support of their credentials before the competent authority whenever demanded for verification. If any information furnished by the bidder is found as false / fabricated then his bid will be rejected and treated as cancelled, even if the same is detected at any stage after signing of the contract and would lead to termination of the contract besides forfeiture of Earnest Money Deposit (EMD) and liabilities towards prosecution under appropriate law. In such cases the bidder / tenderer will be debarred from participation in future tendering process for next 03 (Three) years.
18. Should there be any doubt or obscurity as to the meaning of any of the tender documents or if any further information is required, the tenderer must address his enquiry in writing in duplicate to **Superintending Engineer**, Civil Construction & Maintenance Section, Indian Institute of Technology Kharagpur - 721302, West Bengal. Such enquiries must be submitted not later than **03 (Three)** working days before the last date fixed for submission of the tenders.
19. The sealed Bids shall be received by the Institute at Civil Construction and Maintenance Section not later than the time and date stipulated in the Notice Inviting Tender or Corrigenda otherwise. Tenders that are received after the date and time specified will not be considered.
20. The Technical Bid of tender will be opened on the specified date and time of opening at the Civil Construction & Maintenance Section, IIT Kharagpur in the presence of bidders / tenderers or their Authorised representatives (with proper authorization letter from Owner/Proprietor/Partner/CEO/MD/Director of the company mentioning Name, Address and designation of the person being authorised).
21. Date and time of opening of Price Bid will be informed to the Technically Qualified Bidders and will be opened at the Civil Construction & Maintenance Section, IIT Kharagpur in the presence of bidders / tenderers or their Authorised representatives (with proper authorization letter from Owner/Proprietor/Partner/CEO/MD/Director of the company mentioning Name, Address and designation of the person being authorised).
22. The Institute reserves the right to accept or reject any or all the offer including the lowest without assigning any reason. The Institute does not bind itself to accept the lowest offer.
23. The successful tenderer, shall deposit an amount equal to 5% of the tendered and accepted value of the work as performance guarantee in the form of Demand Draft of a Scheduled Bank in favour of IIT Kharagpur payable at Kharagpur. The time allowed for submission of the performance guarantee shall be 15 days of receiving "Letter of Acceptance" (LOA). This period can be further extended as the written request of the contractor by the Engineer-in-charge for a maximum period ranging from 1 to 15 days with a late fee @ 1.00% per day of Performance Guarantee Amount. If the bidder still fails to deposit the performance guarantee within the extended time period, i.e. within 16<sup>th</sup> day to 30<sup>th</sup> day from the issue of letter of acceptance (LOA), his bid will be rejected and treated as cancelled and the entire Earnest Money Deposit shall be forfeited. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the Contractor, without any interest.
24. Standard Institute payment procedure shall be followed. A sum @ 5% of the gross amount of the bill shall be deducted as Security Deposit from the bill of the contractor. However, Earnest Money shall be adjusted first in the Security Deposit and the rest amount to complete a sum of 5% of gross bill value will be deducted from the contractor's bill. The security deposit of the Contractor shall not be refunded before the expiry of defect liability period after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later.

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

## **ADDITIONAL CONDITIONS OF CONTRACT**

1. The quantities indicated are approximate and may vary at the time of execution. The Institute will exercise absolute discretion for operating all or some items of the schedule.
2. The scope of work includes **Civil works with allied Sanitary & Plumbing and Electrical works**. All works have to be executed in a systematic manner without hampering other jobs. *The bidders must associate himself, with agencies eligible to bid for the minor components (Electrical works) individually. The contractor or the agency he associates with to carry out the electrical work (minor component) shall have to produce valid electrical license from the competent authority in his name. The validity of the license should remain for the whole tenure of the work. The same should be submitted along with the technical bid. The eligible bidders shall quote rates for all items of major component (Civil and Sanitary & Plumbing works) as well as for all items of allied minor component of work (Electrical works).*
3. The total work would be done simultaneously in different floor.
4. Colour & type of flooring, painting etc. have to be approved by the concerned authority. Contractor has to arrange the adequate labour and materials accordingly to fulfill all the above conditions. Contractor has to remove all the debris from the site of execution and dispose them at suitable places shown by the Engineer or his authorised representative at site.
5. Cement used for the work should not be older than two months from the date of manufacture. The contractor should purchase the cement from authorised dealer and submit the test certificates/vouchers prior to execution of the work.
6. All temporary arrangements, staging, working platforms etc. is to be provided by the contractor at his own expense to the satisfaction of the Engineer-in-Charge. The Institute will not however, be liable to pay any compensation due to accident, injury to the contractor's work men or any account what-so-ever.
7. Steel to be supplied and used should be from approved manufacturers. Steel from manufacturers other than approved make / re-rolled steel will not be acceptable. The consumption of steel will be regulated as per bar bending schedule and drawing to the contractor and/or as directed by Engineer-in-charge. Payment of reinforcement rod, will be made as per actual use including overlaps, crank, bending etc., as needed at work site, if any, as per approved drawing. Quantity will be calculated using standard weight per running meter. No wastage on any account is payable. Test certificate of steel should be submitted by the contractor. The contractor must submit vouchers for the steel purchased to the Engineer. All reinforcement used should be free from loose mill scale, loose rust, paint and oil coating etc.
8. All concreting works instructed shall be Machine mixed and Machine vibrated and will have required levels of strength at the time of testing. Poorly executed concrete have to be demolished and repair will not be allowed.
9. The Institute will be at liberty to take samples during the course execution of work and get the same tested at Institute's laboratory to ascertain the quality conforming to relevant specification. The cost of sample and the charges for the testing will have to be borne by the contractor.
10. The contractor will have to maintain the work for **SIX** calendar months from the certified date of its completion.
11. The job is to be done as per WBPWD Building & Sanitary works specification for building / Civil works and WBPWD Roads specification for Road Works, as applicable and provisions made in relevant IS codes must be followed.
12. The bituminous road work shall be carried out by using bitumen of grade VG30 preferably from IOCL, wherever applicable.

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

13. Roof treatment work / water proofing treatment work should be guaranteed by the contractor for 10 years after successful completion of work, wherever applicable.
14. For painting works-
  - i. Volume of paint required is to be procured & stored at site during starting of work to avoid mismatch of shade. And Challan / Tax invoice of procured paint, certified by the Manufacturers, should be submitted to the department.
  - ii. Sampling of paint should be done in presence of the manufacturers' representative and the quality of application to be certified by the manufacturer and the same to be submitted to the department.
  - iii. Surface preparation and procedure of paint application as suggested by the paint manufacturers to be followed properly and Checklist of paint (pro-forma will be provided by EIC during execution) to be jointly signed by the contractor, paint manufacturer.
  - iv. External Painting works to be guaranteed by the paint manufacturer for a period of 03 years for Normal Acrylic Emulsion, 05 years for 100% Acrylic Emulsion and 07 years for super protective Acrylic Emulsion Paint. The warranty should cover replacing of paint to the extent of defect including cost of labour for re-application of coating as may be necessary to set right the paint failure, at the contractor's own risk and cost.  
Paint failure shall mean –
    - a) flaking / peeling / cracking or chalking of paint film
    - or, b) growth of micro-organism like algae/fungus on the painted surface
    - or, c) fading of colour shade of painted surface
  - v. For a particular area, primer and paint to be used should of same make approved by IIT Kharagpur.
15. The contractor shall take adequate precaution and safety measures while executing the renovation of the existing room so as not to cause any damage to adjacent room, toilet, water main and electrical/networking lines/cables.
16. The areas under the scope of work should be barricaded or cordoned off by suitable means to avoid mishaps of any kind, without restricting or hampering, the movement of boarders / residents / users within the Halls of Residence. Proper warning signs should be displayed for the safety of the public whenever clearing works would be undertaken.
17. This safety provision should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot.
18. To ensure effective enforcement of the rules and regulation relating to safety precautions the arrangement made by the contractor shall be open to inspection by the Engineer –in-Charge of the department of their representative.
19. Suitable safety arrangement should be provided as per CPWD safety code.
20. The contractor should ensure that the work front and its adjoining areas should be kept clean of any debris / rubbish at his own risk and cost.
21. The Contractor would not be allowed to store cement / steel / tiles / electrical fittings / wood / plywood / or any such materials to be used for the work in common spaces within the Halls of Residence causing inconvenience to the users.



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Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

## **SCOPE OF WORK & TECHNICAL SPECIFICATION**

The scope of work includes “*Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence*”. The work to be executed according to a strict time schedule and front availability. The agency shall make himself ready to take up a job within short notice. The work comprises of Civil Works, Sanitary & Plumbing and Electrical works as -

1. Civil, Sanitary & Plumbing Works (Major Component), approximately 88% of total work value
2. Electrical Works (Minor Component), approximately 12% of total work value

### **APPROVED MAKE LIST OF MATERIALS TO BE USED WHEREVER APPLICABLE**

SL. NO.	ITEM	SUGGESTED BRAND NAME OR SIMILAR (APPROVED BY THE AUTHORITY)
01.	Cement (PSC)	ACC / Ultratech / Ambuja / Lafarge
02.	Reinforcement Steel	TATA / SAIL / RINL
03.	Structural Steel	TATA / SAIL / RINL
04.	Ceramic Tiles	Johnson / Kajaria / Somany
05.	G.I. Pipes	TATA (Medium Duty)
06.	G.I. Fittings	HB / R
07.	Anodised Aluminum fittings	Allen / Metco
08.	P.V.C. Shutters	Sintex / Patton / Raunaq
09.	P.V.C. Pipes	Oriplast / Supreme / Dupal (Schedule-80)
10.	P.V.C. Cistern	Parryware Slimline
11.	P.V.C. Closet Seat Cover	Parryware Slimline
12.	P.V.C. Connector Pipe	Prayag
13.	P.V.C. Ball Cock	Prayag
14.	P.V.C. Bib Cock / Stop Cock/ Angular Stop Cock / Pillar Cock	Prayag
15.	P.V.C. Waste & Sanitary Fittings	Prayag
16.	I.P.W.C. / E.P.W.C. / Urinal	Parryware / Nycer / Hindware
17.	Basin / Sink	Parryware / Nycer / Hindware
18.	Gate Valve	Leader / Zoloto
19.	C.P. Bib Cock / Stop Cock/ Angular Stop Cock / Pillar Cock	Essco / Jaquar / Marc
20.	C.P. Shower & Shower Arm	Essco / Jaquar / Marc
21.	C. P. Waste Fittings	Essco / Jaquar / Marc
22.	C. P. Bottle Trap	Essco / Jaquar / Marc
23.	Cast Iron Pipe & Fittings	D. N. Sinha / AMC / ALC
24.	Gun Metal Wheel Valve	Zoloto / Alto / Leader
25.	Mirror	Modi Guard / Saint Govin
26.	Synthetic Enamel Paint & Primer	ICI Dulux / Asian / Berger/Nerolac
27.	Distemper & Primer	ICI Dulux / Asian / Berger/Nerolac
28.	APP Membrane	SIKA / PIDILITE / FOSROC
29.	Anti corrosive water proofing paint with aluminium finish	STP Super Silver Shield of Equivalent
30.	Extruded Aluminium Section for Doors, windows, Partitions etc.	HINDALCO/JINDAL or equivalent.

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## INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR, WEST BENGAL

### TENDER DOCUMENT FOR

Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

#### PART – II : FINANCIAL BID

NOTICE INVITING TENDER NO. : SE(C)-IIT-TEN-2017-18\_09  
DATED : 07.04.2017

APRIL 2017

Last Date & Time of Submission : 20.04.2017, upto 3:00 pm

CIVIL CONSTRUCTION & MAINTENANCE SECTION  
IIT, KHARAGPUR,  
WEST BENGAL

यागः कर्मसु कौशलम्

SUPERINTENDING ENGINEER (CIVIL)  
IIT KHARAGPUR

Name of Bidder : M/S.....

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Issued on: .....

CCM Tender Sl. No. \_\_\_\_\_

Dated \_\_\_\_\_

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

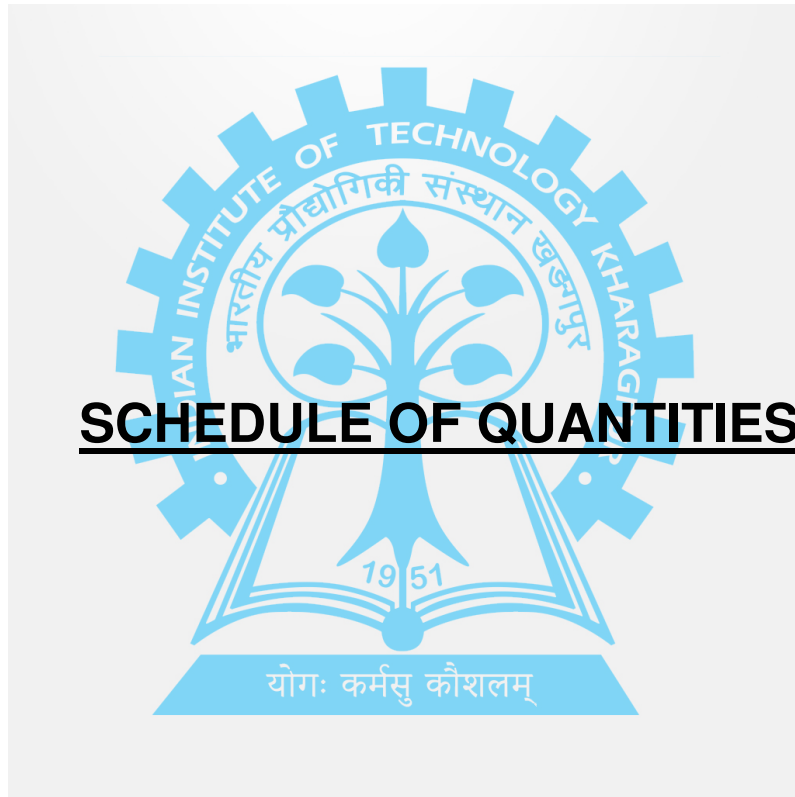
Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

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Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.



**CIVIL CONSTRUCTION AND MAINTENANANCE SECTION**

**IIT KHARAGPUR**

**Name of the work : Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur**

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
	<b>PART- A : CIVIL WORKS</b>				
1	Surface Dressing of the ground in any kind of soil including removing vegetation inequalities not exceeding 15 cm depth and disposal of the rubbish within a lead upto 75 m as directed.	Sqm.	410.000		
2	Stripping off worn out plaster and raking out joints of walls, ceilings etc. upto any height and in any floor including removing rubbish within a lead of 75m as directed.	Sqm	850.000		
3	Applying 2 coats of bonding agent with synthetic multi functional rubber emulsion having adhesive and waterproofing properties by mixing with water in proportion (1 bonding agent : 4 water : 6 cement) as per Manufacturer's specification [Cement to be supplied by the Department] (Consumption of Cement @ 7.2 kg/10 Sq.M)	Sqm	850.000		
4	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding / staging where necessary at all floors and levels - 20 mm thick plaster with 1:6 cement mortar.	Sqm	850.000		
5	Cement concrete with graded stone ballast (40 mm size excluding shuttering), In all floor, Pakur Variety], 1:3:6 proportion.	Cum	15.000		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
6	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement,if any, in ground floor as per relevant IS codes. Pakur Variety	Cum	8.000		
7	Ordinary cement concrete (mix 1:1.5:3) with graded stonechips (20 mm nominal size) excluding shuttering and reinforcement if any, as per relevant IS codes.	Cum	3.000		
8	Hire and labour charges for shuttering with centering and necessary staging upto 4m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works, at any floor and level as per decision & direction of Engineer-In-Charge. - Using 25 mm to 30 mm thick wooden shuttering	Sqm	30.000		
9	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars. Stirrups. Binders etc. initial straightening and removal of loose rust (if necessary). Cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16 gauge block annealed wire at every intersection. complete as per drawing and direction. For works in foundation, basement and all floor / Tor steel /Mild Steel.	Kg	30.000		
10	Brick work with 1st class bricks in cement mortar (1:6), in superstructure, at any floor and level	Cum	5.000		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
11	100 mm. thick brick work with Fly Ash Bricks set in cement sand mortar (1:4) including raking out joints, curing, scaffolding etc. complete in all respect at all floors and levels	Sqm	20.000		
12	Artificial stone in floor, dado, staircase etc with cement concrete (1:2:4) with stone chips, laid in panels as directed with tapping made with ordinary or with cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including ranking out joints or roughening of concrete surface and application of cement slurry before flooring works using cement @ 1.75 kg/sq.m all complete including all materials and labour -35 mm thick with 3 mm. thick topping.	Sqm	200.000		
13	Neat cement punning about 1.5mm thick in all,dado>window sill,floor etc. Cement consumption : 0.152 cu.m per 100 sq.m.	Sqm.	92.000		
14	Applying interior grade Acrylic Primer of approved quality and brand on plastered or concrete surface old or new surface to receive Distemper/ Acrylic emulsion paint including scraping and preparing the surface thoroughly, complete as per manufacturer's pecification and as per direction of the EIC at all floors and levels. One Coat Water based interior grade Acrylic Primer	Sqm	1310.000		
15	Acrylic Distemper to interior wall, ceiling (as per manufacturer's specification) including cleaning and smoothning of surface al all floors and levels. Two Coats	Sqm	6550.00		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
16	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface in necessary.				
	(a) On timber or plastered surface, With super glass ( hi-gloss), Two coat (with any shade except white) .	Sqm	425.000		
	(b) On steel or other metal surface. With super glass (hi-gloss). Two coat (with any shade except white) .	Sqm	730.000		
17	Supplying best Indian sheet glass panes set in putty and fitted and fixed with nails and putty complete in all floors for internal wall & external wall. (3 mm thick)	Sq.m.	10.000		
18	Providing and fixing PVC Door Frame of size 50x47mm with a wall thickness of 5mm ( $\pm 0.2$ mm) made out of single piece extruded PVC profile, with mitred cut joint sand joint with 2 nos. of PVC bracket of size 190 mm x 100 mm long arms of cross section size 35 mm x 15 mm & self driven self tapping screws, the vertical door profiles to be reinforced with 0x20mm M.S. rectangular tube of 0.8 mm , including providing EPDM rubber gasket weather seal hroughout the frame, including jointing 5 mm PVC frame strip with PVC solvent cement on the back of the profile. The doorframe to be fixed to the wall using 8 x100mm long anchor fasteners complete, all as per manufacturer's specification and direction of Engineer -in- charge.	Mtr.	10.000		



Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
19	Supplying, Fitting & Fixing 30 mm thick Factory made solid Panel PVC Door Shutter consisting of outer frame made out of M.S. tubes of 19 gauge thickness and size 19 mmx19 mm for styles, top and bottom rails, M.S. frame shall have cost of steel primers of approved make and manufacture, M.S. frame covered with 5 mm th. heat moulded PVC "C" channel of size 30 mm th, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on either sides forming styles; and 5 mm th. 95 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm tapered in 45 degree on the inner side to form top & bottom rail and 115 mm wide PVC sheet out of which 75mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel with 10 mm (5 mmx2) th.,20 mm wide cross PVC sheet as gap insert for top rail and bottom rail. Paneling of 5 mm th. both side PVC sheet to be fitted in the M.S. frame welded/sealed to the styles & rails with 7 mm (5 mm+2 mm) th.x15 mm wide PVC sheet beading on inner side and joined together with solvent cement adhesive. An additional 5 mm th. PVC strip of 20 mm which is to be stuck on the interior side of the "C" channel using PVC solvent adhesive etc. complete excluding all necessary hardwares as per direction of Engineer-in-Charge. In ground floor.	Sqm.	5.000		
20	Anodised aluminium barrel / tower / socket bolt (full covered) of approved manufactured from extruded section conforming to I.S. 204/74 fitted and fixed with cadmium plated screws: 150mm long x 10mm dia. bolt.	Each	20.000		
21	Anodised aluminium D-type handle of approved quality manufactured from extruded section conforming to I.S. specification (I.S. 230/72) fitted and fixed complete with continuous plate base (Hexagonal/ Round rod) - 150mm grip x 10mm dia. bolt.	Each	20.000		
22	Iron butt hinges of approved quality fitted and fixed with steel screws, with ISI mark - 100mm x 50mm x 1.25mm.	Each	20.000		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
23	Supplying, fitting and fixing windows and ventilators with or without integrated grills conforming to IS 1038-1975 and manufactured from rolled steel sections conforming to IS 7452-1974 with non-friction projecting type, box type hinges, glazing clips, lugs locking bracket, handle plate etc, including hoisting in position, straightening if required, fixing lugs in cement concrete (1:2:4) with stone chips 20 mm down cutting holes and mending good damages to match with existing surface complete in all respect excluding glazing. (b) Openable steel windows as per IS sizes with side hung shutters and horizontal glazing bars. [The extra rate admissible for the openable portion only]	Sq.m.	10.000		
24	M.S. integrated grill as per approved design integrated with steel window or ventilator, joints continuously welded with M.S.flats and bars.	kg	150.000		
25	Supplying, fitting & fixing 1st quality Ceramic tiles in walls and floors to match with the existing work & 4 nos of key stones (10 mm ) fixed with araldite at the back of each tile & finishing the joints with white cement mixed with colouring oxide if required to match the colour of tiles including roughening of concrete surface, if necessary or by synthetic adhesive & grout materials etc.				
	(a) Floor : With Polymerised Adhesive and Epoxy grout pointing including spacer - 2 mm (When Tiles are laid over existing hard ready surface) - Area of each tile upto 0.09 Sq.m [using adhesive 3 mm thick] and Coloured decorative	Sq.M	125.000		
	(b) Wall : With Polymerised Adhesive and Epoxy grout pointing including spacer - 2 mm (When Tiles are laid over existing hard ready surface) - Area of each tile upto 0.09 Sq.m [using adhesive 3 mm thick] and Coloured decorative	Sq.M	525.000		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
26	18 mm. to 22 mm. thick, kota stone slab set in 20 mm thick (avg) cement mortar (1:4) in floor, stair & lobby including pointing in cement slurry with admixture of pigment matching the stone shade, including grinding & polishing as per direction of Engineer - in - charge to match with the existing work. [Slurry for bedding @ 4.4 kg/Sq.m and pointing @2.0 kg/Sq.m]	Sq.M	20.000		
27	Dismantling all types of masonry excepting cement concrete plain or reinforced, stacking serviceable materials at site and removing rubbish as directed within a lead of 75 m. In all floors at any height and level including roof	Cu.M	2.000		
28	Removal of existing treatment such as old terfelt etc. Thoroughly the surface using blower etc. And providing and laying A.P.P (Atactic polypropylene polymer) modified prefabricated 4mm thick water proofing membrane (Hydroflame, Dr. Fixit, Texsa or equivalent) black finished reinforced with non woven polyester matt. consisting of a coat of bitumen primer for bitumen membrane @ 0.40 lit./ Sqm. by the same membrane manufacture of density of 25° C 0.87-0.89 Kg./lit. and viscosity 70-160 cps over the primer coat the layer of membrane shall be laid using Butane Torch and ceiling all joints etc. and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be : joint strength in longitudinal and transverse direction at 23° C as 650/450 N/5 cm Tear strength in longitudinal and transverse direction at 300/250 N. shoffing point of membrane not less than 150° C Cold flexibility shall be upto 2° C when tested in accordance with ASTM, D-5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane. 4mm thick (work should be guaranteed for 10 years)	Sqm.	25.000		

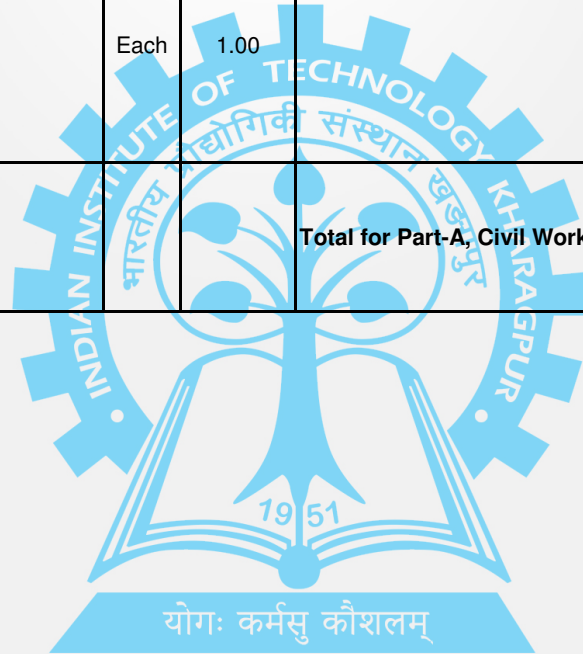
Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
29	<p>Supply and apply a flexible FPO based membrane for expansion joint width of 100 mm by Supply and applying an epoxy based membrane adhesive base coat &amp; top coat.</p> <p><b>Product:</b> Sikadur®-Combiflex® SG System or equivalent</p> <p><b>Product requirements:</b>            Chemical Base Modified flexible Polyolefin (FPO) with advanced adhesion            Fire Rating Euroclass E (EN ISO 11925-2, classification to EN 13501-1)            Service Temperature -30°C min. to +40°C max. in wet conditions -30°C min. to +60°C max. in dry conditions            Tensile Strength &gt; 12 N/mm<sup>2</sup> (EN 12311-2)            Tear Strength &gt; 40 N/mm (ISO 34-B)            Elongation at Break &gt; 600 % (EN 12311-2)            Seam strength &gt;300 N/5cm (2 mm) (EN 12316-2) &gt;400 N/5cm (2mm) (EN12317-2)            Behaviour under hydrostatic pressure 6bar/72h No leakage (EN 1928-B)            Thermal Resistance Thermal ageing:Passed (SIA V280, 1996)            Bonding test: No cracks at -40°C (EN 495-5)            Artificial weathering:7500 h passed (SIA V280, 1996)            Adhesive Product: Sikadur®-31 C or equivalent</p> <p><b>Consumption:</b> 1.4 kg/m (strip width 200 mm)</p> <p><b>Product requirements: mixed density:</b> 1.75 kg/ltr; bond strength &gt; 1.5 N/mm<sup>2</sup>.</p> <p>The rates should include the repair of edges, backing material, tools tackles etc all complete.</p>	Mtr.	30.000		
30	<p>Supplying &amp; applying metal 2mm / Aluminium / SS-plate for protection of membrane – to keep one side fixed.</p>	Mtr.	30.000		
31	<p>Cleaning of RCC to remove dust and loosely adhering particles completely.            Treating of pot holes, surface hair cracks, construction joint (if any) with polymer modified mortar.</p>	Sq.M	206.000		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
32	Makeing the groove 20mm x 20mm along the joints of concrete floor and vertical brick wall and to clean properly. The groove to be filled with Sika polymer modified mortar with a bond coat of Latex polymer. Supply and application of 1:3 cement sand mortar, mixed with <b>Sika Top 77</b> , the acrylic polymer modified high quality emulsion, as a coving at the corners of floor and the vertical surface area.	R.M.	440.000		
33	Supply and application of <b>Sika Flexicoat 1K</b> or equivalent – one component, flexible, micro fibre reinforced , based on cement, modified with special alkali-resistant polymers, waterproof coating onto the prepared surface in a continuous film on the floor of the wet area, taking the coating over the vertical surfaces on to the floor and over the coving on to the wall (before tiling) to at least 300mm above the final finished floor level. The coating shall also be continued on to the inner surfaces of the pipe penetration holes. Two coats shall be applied. Sika Fab1 fibre cloth mesh to be laid when the first coat is become tacky. 100 mm lapping to be maintained on the edges of fibre cloth mesh. After curing of first coat – top coat of Sika Flexicoat system to be applied on the right angle of first coat. To allow the top cat to dry for six hrs. <u>System-</u> Sika Flexicoat Primer Sika Flexicoat base coat Sika Fibre cloth mesh Sika Flexicoat Top Coat Consumption:1.5Kg per Sqm/2 coat Ponding test to be done free of cost for 48 hrs and to check from soffit to ensure zero water seepage from the slab and joints.	Sq.M	206.000		
34	Filling the annuals of pipe joints by rich concrete of min M-20 grade with non shrink admixture; followed by providing <b>Sikagard 694F(I)</b> , a moisture insensitive epoxy putty in a continuous, 10mm thick gasket around the pipes to a width of approximately 10 mm.	Per Point	10.000		
35	Precise cutting of tile joints for cleaning existing cementious grout and re-grouting the joints of tiles having joints of 3mm to 4mm width, using epoxy grout mix of organic coated filler of desired shade including filling / grouting and finishing complete as per direction of Engineer-in-charge. <b>Note:</b> The application should be done through the authorised applicator of the contractor and should guaranteed for a period of Minimum 3 Years against water seepage, Preferred Make: Leticrete, Asian Paints or Fosrock -Size of tile - 300mm x 300mm	Sqm	100.000		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
36	Removal of rubbish, earth etc. from the working site and disposal of same beyond the compound, in conformity with the Municipal / Corporation Rules for such disposal, loading into truck and cleaning the site in all respect as per direction of Engineer in charge.	Cu.M.	25.000		
37	Supply, fitting and fixing for Exhaust Hood & Ducting .				
	a) S.S (304 Quality) Exhaust Hood and filetr (36" widht X 24" Hight)	Rft.	20.00		
	b) Ducting GI 22G (22" X 12")	Rft.	27.00		
	c) 2 H.P Motor with Blower (Crompton Make)	Each			
	d) 3 H.P Motor with Blower (Crompton Make)	Each	1.00		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
	e) 7 H.P Motor with Blower (Crompton Make)	Each			
	f) Supporting structure (M/S Angle/channel) with painting.	Kg.	100.00		
	g) Electrical works.				
	i) Cable 2.50mm/2 Core	Mtr.	15.00		
	ii) Cable 4.00mm/2 Core	Mtr.	10.00		
	iii) MCB-40 AMP	Each	1.00		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
	iv) Starter L&T Make	Each	1.00		
	v) Circuit breaker approved make	Each	1.00		
				<b>Total for Part-A, Civil Works =</b>	





Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
	<b>PART-B : ELECTRICAL WORKS</b>				
1	Drawing of wires through conduit/Casing as per rules after supply and fixing of MMS conduit/casing of Suitable 25-32 mm as per requirement , either in recess or in surface as instructed and mending good the damages to original finish and painting on wall. Make: Conduit/Casing-Caping - Presto plast/ Precission.	Meter	200		
2	Supply and fixing of modular type Flush metal box with inner outer plate, modular cover of the following sizes for fixing of switch socket regulator etc. with necy. connection, recessed in wall and mending good the damages including painting.This includes disconnecting and dismantling the old items and depositing them to store. Make: Modular board and cover: Legrand (Myrius), Crabtree (Platinum range), MK - Wraparound				
a)	2 Module	Each	5		
b)	3 Module	Each	10		
c)	6 Module	Each	5		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
d)	8 Module	Each	2		
3a	Supplying and fixing of switch type Anchor Penta fan regulator .Model:38284	Each	50		
3b	S&F of modular type 5/6 Amp one way switch on board with all connection.	Each	70		
3c	S&F of modular type 15/16 Amp one way switch on board with all connection.	Each	20		
3d	S&F of modular type 6 Amp 3 pin shuttered socket on board with all connection.	Each	30		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
3e	S&F of modular type 6pin,15/16 Amp socket on board with all connection.	Each	20		
3f	S&F of modular type blanking plate (1M) on board with fixing. Max. 1 no. blank plate is allowed for power board only.	Each	20		
3g	3 in 1 combined socket 20A Cat No-38808,Make -Anchor	Each	6		
3h	5 in 1 combined socket 20A , Cat No-38579,Make -Anchor	Each	6		
3i	Ceiling rose, 3 pin, 5 A ISI marked	Each	60		
3j	Legrand switch 6A 1 module 250V AC,Cat no-67551.	Each	60		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
3k	Legrand switch 32A 2 module double pole 250VAC, Cat no-6755 26.	Each	50		
4	Supply and fixing of modular type Surface mounted plastic box with inner outer plate, modular cover of the following sizes for fixing switch socket regulator etc. with nocy. Connection, fixed on wall and mending good the damages including painting. This includes disconnecting and dismantling the old items and depositing them to store. <b>Make:</b> Modular board and cover: legrand (Mosaic), Crabtree(Thames), MK and as required.				
a)	3M	Each	4		
b)	6M	Each	8		
c)	8M	Each	4		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
5	Wiring for light point/ fan point/ exhaust fan point/ call bell 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 GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required. <b>Make:</b> Casing capping— Precision/ Presto plast/ Finolex, Cu wire: Havells/ Finolex/Polycab/ Gloster- 1.1kv grade. Switch, Ceiling Rose etc: Anchor. Modular Switch/ socket: Legrand (Myrius)/ Crabtree ( platinum range) /MK (Wraparound).	Each	25		
6	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 (Make:1.1kv grade FRLS PVC insulated copper conductor-Havells/Finolex/Polycab, PVC MMS conduit -Precision/Presto plast/Finolex)				
a)	2 X 1.5 sq.mm. + 1 X 1.5 sq.mm. earth wire	Meter	30		
b)	2 X 2.5 sq.mm. + 1 X 2.5 sq.mm. earth wire	Meter	150		
c)	2 X 4 sq.mm. + 1 X 4 sq.mm. earth wire	Meter	100		
d)	2 X 6 sq.mm. + 1 X 6 sq.mm. earth wire	Meter	40		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
e)	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Meter	25		
7	Earthing with G.I. earth pipe 4.5 meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required. <b>GI Pipe make:</b> Tata medium/Bansal medium <b>Note:</b> All materials and hardwires are to be supplied by the contractor.	Each	4		
8	Providing and fixing 6 SWG dia G.I. wire on surface or in recess	Meter	200		
9	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. This includes S&F of 2x10 SWG G.I wire as earthing attachment with the cable Upto 35 sq. mm (clamped with 1mm thick saddle)	Meter	100		
10	Supply and making end termination with brass compression gland and AL lugs for following size of PVC/XLPE al. conductor cable of 1.1kV grade as required				

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
a)	3.5C x 35 sq.mm	Each	3		
b)	4 C x10 sqmm	Each	4		
c)	4 C x 6 sqmm	Each	2		
11	Supply of 3.5 core XLPE armoured 10 sq. mm aluminium cable 650/1100V grade, confirming IS : 7098( part-1) <b>Make</b> : Polycab/Gloster/Havells	Meter	100		
12	Supplying and fixing of single phase and neutral, sheet steel, MCB distribution board, 240 V, on surface/recess, complete with tinned cu busbar, neutral busbar, earth bar, din bar interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB /Isolator) 6 way, Double door IP43. <b>Make</b> : Hager/Legrand/Schnider/or equivalent	Each	3		
13	Supplying and fixing 240/415 V MCB of Breaking capacity 10 kA & C characteristics on din rail of existing DBs and necessary connection of following pole. <b>Make</b> : Legrand/Hager/Schnider/or equivalent				

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
a)	Single pole , 6-32A	Each	10		
b)	Double pole, 63A	Each	6		
c)	Tripple pole, 32A	Each	5		
d)	Four pole,40A	Each	6		
14	Dismantling of old and unused wirings, cables, Earth spikes, unused earth strips, Board with switch, socket,light fittings etc in one room and removing the items and cleaning the areas.Dismantling items should be deposited to the store.	One Job	5		
15	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, onsurface/ recess, complete with tinned copper bus bar, neutral busbar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/4 way (4 + 12), Double door)	Each	3		

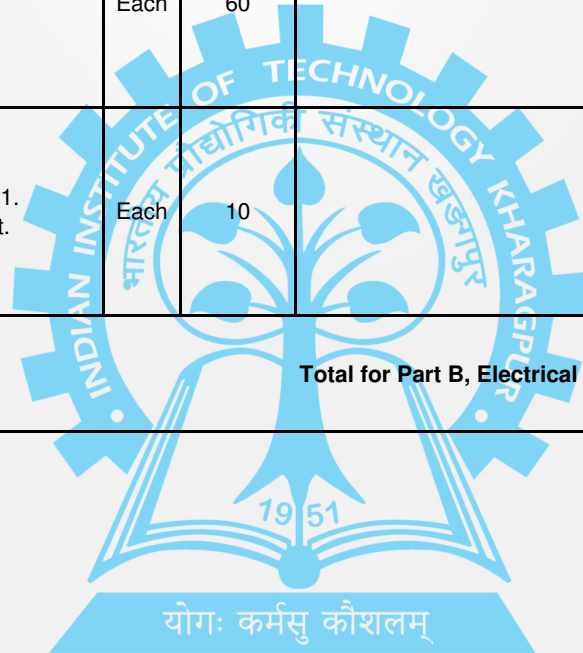


Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
16	Installation, testing and commissioning of ceiling fan(36", 48", 56" etc), including wiring the down rods of standard length (upto 30 cm) with 1.5sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	50		
17a	Rewinding & reassemble of 48" ceiling fan without changing the bearing .	Each	25		
17b	Overhauling with assembling of 48"ceiling fan with changing the bearing (SKF Make Bearing) .	Each	40		
17c	Painting of ceiling fan in installed position with one or more coats of spray painting with synthetic enamel paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent etc. as required.	Each	100		
18	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required. - Up to 510 mm sweep.	Each	5		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
19	Supply of 25 W Led street light, versatile pressure die-cast aluminium IP65, 5000k, 240V, Efficacy- greater than equal to 95% In-built electronic driver with APFC & THD<10%. Output Short-Circuit, Over Voltage, Surge & Phase to Phase Protection. CRI >80, LED beam angle= 120° with 32 mm dia X 1.00 meter long G.I. pipe (medium class) bracket for mounting of street light fitting on pole/wall including bending the pipe to the required shape incl. supply of flat iron clamps with nuts, bolts and washer, painting the flat iron with primer and finish paint etc. as required. <b>Make</b> : Philips/Syska/Havells/Wipro/Bajaj/Crompton <b>Note</b> : Contractor should give 5 years guarantee of total Led set like driver, lamp etc after commissioning at site.	Each	10		
20	Only fixing of light fittings (Tube, LED etc) on wall /ceiling or as desired on round wooden block/ MS clamp and connection complete after assembling and testing, providing 3*1.5 Sq.mm. PVC insulated Cu wire. This includes disconnecting and dismantling the old items and depositing them to store. <b>Note</b> : a) Round wooden blocks and all hard wares as reqd. are to be provided by the contractor. b) Dept will supply only the light fittings.	Each	50		
21	Fixing only exhaust fan after making hole in wall and making good damages and smooth cement finish etc. as practicable as possible and providing necy. length of PVC insulated wire and making connection for exhaust of following diameter. -Up to 18".	Each	5		
22	Supply & Fixing GI louver shutter on wall with necy. bolts & nuts (6 mm dia x 62 mm long) -30 cm Exhaust fan (12")	Each	5		
23	Supply only 12 inch metal exhaust fan, 1400 rpm, air delivery-1600 cu. Mtr/hr, 230 V. <b>Make</b> : Crompton Graves/Havells/Bajaj/or equivalent	Each	3		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
24	Supply only 18 inch metal exhaust fan,1400 rpm, air delivery-6120cu. mtr/hr, 230 V. <b>Make :</b> Cromton Graves/Havells/EPC or equivalent	Each	2		
25	Supply of 18w LED tube light with fittings(PC Housing). Cool white. LED Tube Efficacy >100 lumen /watt , p.f greater than 0.95, THD lesser than 10% with integrated electronics driver.(operating voltage 200 V-270 V AC) with overvoltage, under voltage and shortcircuit protection with aluminium heat sink. LED chip should be of Cree, Nichia, OSRAM, Philips make. <b>Make:</b> Philips/Crompton/Havells/HPL/Syska/Goldwyn. <b>Note:</b> 1. Manufacturerer has to provide LM 79 & 80 certificates from NABL accredited laboratories/Govt. approved Labs . 2. Contractor has to provide five years replacement guarantee of the LED tube light with fittings after installation and commissioning of the units at site. 3. Labeling on each LED tube light with paint/permanent markers mentioning brief description , date of installation, date of expiry of guarantee etc is mandatory.	Each	20		
26	Supply & fixing of 18 watt pl Electronics choke, Equivalent to Model no.IZ-Tronic 1X18/240 osram make in the Existing fitting . <b>Make:</b> Osram/Havells/Crompton.	Each	75		
27	Supply & fixing of 18 watt pl lamp 2pin,cool white ,Equivalent to Model No: PL-c-2P,18W/865 Philips make. Make:Philips/Crompton Graves.	Each	100		
28	Supply & fixing of 36w tube light in Tube fitting <b>Make-</b> Philips/Crompton Graves	Each	10		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
29	Supply & fixing of 36 W ,open type Cu ballast,240V <b>Make-</b> Philips/Crompton Graves	Each	10		
30	Supply and fixing 6A,angle holder white ,cat no-39527 <b>Make-</b> Anchor.	Each	60		
31	Supplying of ceiling fan sweep 1200 mm, Displacement in Cmm 221. <b>Model:</b> Usha Technix 5 star,Colour: White. Make: Usha/C.G/Orient.	Each	10		
				<b>Total for Part B, Electrical Works =</b>	



Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
	<b>PART-C : PLUMBING AND SANITARY WORKS</b>				
1	Dismantling H.C.I. pipe with fittings including melting lead caulked joints.100 mm dia	mtr	200		
2	Refixing H.C.I. pipe with fittings including lead caulked joints(with the old molten lead).100 mm dia	mtr	200		
3	Melting out lead caulked joint 100 mm	mtr	10		
4	Renewing lead caulked joints for H.C.I. pipe with new gaskets.	each	10		
5	Renewing door of H.C.I. bend or junction with new bolts and nuts including taking out.	each	20		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
6	Supplying, fitting & fixing Cast iron soil pipe only conforming to I.S. 3989 /1970 and I.S. 1729/1964 with bobbins, nails etc. including making holes in the wall, floor etc. and cutting trenches etc. in any floor through masonry concrete, if necessary, and mending good damages with necessary jointing materials and painting two coats to the exposed surface with approved paint complete. (Measurement will be made along the center line of the total pipe line in fitted condition including specials, payment for specials & Painting will however be paid seperately). With lead caulked joints. 100 mm dia. (internal)	mtr	170		
7	Supplying, fitting & fixing Cast iron single branch equal Tee conforming to I.S. 1729/1970 including joining and painting two coats to the exposed surface with approved paint complete. (Payment of Painting will however be paid seperately). With lead caulked joints				
a	100 mm dia. with door	each	24		
b	100 mm dia. without door	each	5		
8	Supplying, fitting & fixing H.C.I. bend with door conforming to I.S.S. including jointing complete and painting two coats to the exposed surface with approved paint complete. (Payment of Painting will however be paid seperately). With lead caulked joints 100 mm dia.	each	12		
9	Supplying, fitting & fixing H.C.I. bend without door conforming to I.S.S. including jointing complete and painting two coats to the exposed surface with approved paint complete. (Payment of Painting will however be paid seperately). With lead caulked joints 100 mm dia.	each	5		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
10	Supplying, fitting & fixing approved patent vent cowl I.C.I. conforming to I.S.S and painting two coats to the exposed surface with approved paint complete. (Payment of Painting will however be paid seperately). 100 mm dia.	each	5		
11	Supplying,fitting and fixing cast iron 'P' or 'S' trap conforming to I.S. 3989 / 1970 and 1729 / 1964 including lead caulked joints and painting two coats to the exposed surface. (Painting to be paid seperately)				
a	P' Trap 100 mm dia.	each	10		
b	S' Trap 100 mm dia.	each	2		
12	Supplying, fitting and fixing cast iron extension pipes for using in Traps only (connector) conforming to I.S.3989/1970 and 1729/1964 including lead caulked joints complete and painting two coats to the exposed surface with approved paint complete. (Payment of Painting will however be paid seperately). 100 mm X 600 mm	each	15		
13	Supplying, fitting and fixing C.I. round grating.100 mm	each	20		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
14	Taking out rain water down pipes, removing chokages and refixing the same in position including mending good damages (of taking out and refixing)	mtr	10		
15	Taking out and refixing C. I. Grating of down pipe after cleaning the mouth including mending good damages in cement mortar (1:3).	each joint	10		
16	Supplying, fitting & fixing UPVC pipes A- Type and fittings conforming to IS:13592-1992 with all necessary clamps nails, including making holes in walls, floor etc. cutting trenches in any soil through masonry concrete structures etc if necessary and mending good damages including joining with jointing materails (Spun Yarn, Valamoid/Bitumen/M-Seal etc) complete.				
A	UPVC pipes				
i)	110 mm. Dia.	mtr	20		
ii)	75 mm. Dia.	mtr	100		
B	UPVC FITTINGS				



Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
i)	Plain Tee 110 mm. Dia.	each	2		
ii)	Plain Y 110 mm. Dia.	each	2		
iii)	Bend 87.5 degree	each	2		
iv)	Shoe 110 mm. Dia.	each	2		
17	Cutting hole through wall, roof or cornice and mending good all damages.	each	50		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
18	Supplying, fitting and fixing E.W.C. in white glazed vitreous chinaware of approved make complete in position with necessary bolts, nuts etc. WITH P TRAP	each	10		
19	Supplying, fitting and fixing Anglo-Indian W.C. in white glazed vitreous china ware of approved make complete in position with necessary bolts, nuts etc. -With 'P' trap (with vent)	each	20		
20	Supplying, fitting and fixing Closet seat of approved make with lid and C.P. hinges, rubber buffer and brass screws complete. Anglo indian type(white)	each	30		
21	Supplying, fitting and fixing 32 mm dia. Flush Pipe of approved make with necessary fixing materials and clamps complete. Polythene Flush Pipe	each	30		
22	Dismantling E.P. or Anglo-Indian W.C.	each	30		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
23	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.	sqm	210		
24	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary :On steel or other metal surface Two coats (with any shade except white)	sqm	210		
25	Supplying, fitting and fixing G.I. pipes of TATA make with all necessary accessories, specials viz. socket, bend, tee, union, cross, elbo, nipple,longscrew, reducing socket, reducing tee, short piece etc. fitted with holder bats clamps, including cutting pipes, making threads, fitting, fixing etc. complete in all respect including cost of all necessary fittings as required, jointing materials and two coats of painting with approved paint in any position above ground. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accesories, specials. Payment for painting will be made seperately) - For Exposed Work with GI Pipes				
a	15mm dia light quality	mtr	10		
b	20nn dia light quality	mtr	10		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
c	25mm dia light quality	mtr	10		
d	40mm dia light quality	mtr	20		
e	50mm dia light quality	mtr	20		
26	<p>Supplying, fitting and fixing PVC pipes of approved makeof (medium duty) conforming to ASTMD - 1785 and threaded to match with GI Pipes as per IS : 1239 (Part - I). with all necessary accessories, specials viz. socket, bend, tee, union, cross, elbo, nipple, longscrew, reducing socket, reducing tee, short piece etc. fitted with holder bats clamps, including cutting pipes, making threads, fitting, fixing etc. complete in all respect including cost of all necessary fittings as required, jointing materials and two coats of painting with approved paint in any position above ground. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accesories, specials. Payment for painting will be made seperately)</p> <p>- For Exposed Work with PVC Pipes</p>				
a	15mm dia	mtr	100		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
b	20mm dia	mtr	5		
c	25mm dia	mtr	10		
d	40mm dia	mtr	20		
e	50mm dia	mtr	20		
27	Providing fitting fixing prayag or equivalent make bib cock.	Each	5		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
28	Providing fitting fixing prayag or equivalent make stop cock.	Each	5		
29	Providing fitting fixing prayag or equivalent make pillar cock.	Each	5		
30	Providing fitting fixing prayag or equivalent make swivel shower. 75 mm round	Each	5		
31	Providing fitting fixing prayag make angular stop cock.	Each	5		
32	Providing fitting fixing GI hook	Kg.	20		

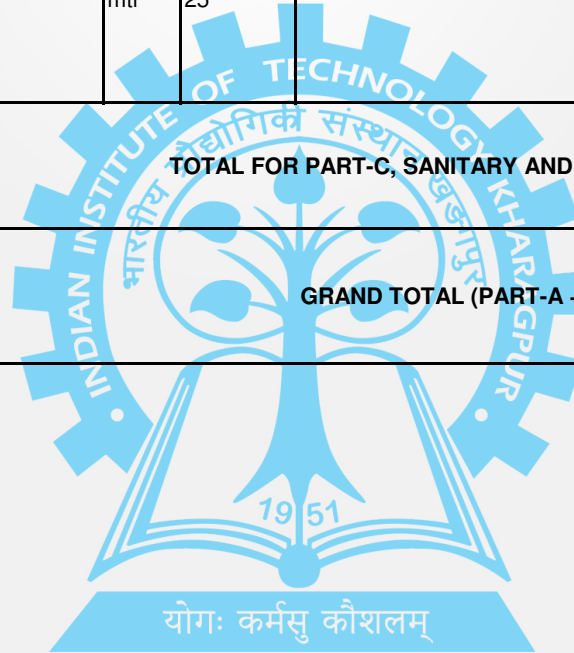
Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
33	labour charges for dismantling&refixing bib cock,stop cock shower, pillar cock, fixing old/new taps	Each	50		
34	Supplying, fitting, fixing 32 mm dia P.V.C waste pipe for basin or sink with coupled at one end with nut 32mm dia with waste fittings 115 cm long.	Each	20		
35	Supplying, fitting and fixing gunmetal wheel valve of approved brand and make tested to 21 kg per sq. cm. (for water lines only).				
a	25 mm dia	Each	10		
b	50 mm dia	each	5		
36	Dismantling cistern including disconnecting all pipes, accessories and fittings.Up to 10 litre	Each	10		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
37	Refixing cistern including refixing all pipes, accessories and fittings.Up to 10 litre	Each	10		
38	15 mm dia P.V.C connector prayag make or its equivalent quality, white flexible with both end coupled with aluminium nut supplied fitted and fixed - 450 mm long	Each	20		
39	Providing fitting fixing 10 lit P.V.C low down cistern "Parryware "Slimline" or its equivalent quality with C.I. Bracket with two coats of painting.	Each	2		
40	Dismantling basin, sink with waste fittings and brackets	Each	10		
41	Refixing wash basin with brackets with or without waste pipes	Each	10		
42	Porcelain wash basin Parryware Or Hindware/institute approved make supplied fitted and fixed with bracket, including painting (550mm x 400mm) size including waste and coupling with wastepipe.	Each	2		



Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
43	Brick work in cement mortar (1:6) in foundation & plinth.	Cum	0.5		
44	15 mm thick plaster with cement mortar (1:4)	Sqm	20		
45	Neat cement punning about 1.5mm thick in wall,dado>window sill,floor etc. NOTE:Cement 0.152 cu.m per100 sq.m.	Sqm	20		
46	Dismantling G.I or P.V.C . pipe with fittings carefully including removing to any distance and stacking.				
a)	15mm dia upto 25mm	mtr	25		
b)	40mm dia upto 50mm	mtr	25		
47	Refixing G.I. or P.V.C pipe with fittings after cleaning where necessary				
a)	15mm dia	mtr	25		

Sl. No.	Description of Item	Unit	Quantity	Rate (Rs. In figure & words)	Amount (Rs. In figure & words)
b)	20mm dia upto25mm	mtr	25		
c)	40mm dia upto50 mm dia	mtr	25		
<b>TOTAL FOR PART-C, SANITARY AND PLUMBING WORKS =</b>					
<b>GRAND TOTAL (PART-A + PART-B + PART-C) =</b>					
<b>Rupees in words :</b>					
					<b>Signature of the Contractor with date &amp; seal</b>



# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for Repair and Renovation of Toilets Ducts, Window Chajjas, Plinth Protection, Expansion Joint Treatment and Room Repairing adjacent to Toilets in SAM Hall of Residence at IIT Kharagpur.

## FORM OF TENDER

(To be filled by the Tenderer with sign & stamp and submitted within the Financial Bid envelope)

To  
**The Superintending Engineer (Civil)**  
**Civil Construction & Maintenance Section**  
**Indian Institute of Technology**  
**Kharagpur, West Bengal**

I/We, \_\_\_\_\_ Son/Daughter of Sri \_\_\_\_\_  
Proprietor/Partner/CEO/MD/Director of M/s. \_\_\_\_\_ of  
(Address) \_\_\_\_\_

having examined the site of works, carefully read and understood the Specifications, General Conditions of Contract and Conditions of the Tender, hereby tender and undertake to execute and complete all the works required to be performed in accordance with the Specifications, Bill of Quantities, General Conditions of Contract, the rates and prices set out in the annexed Bill of Quantities within \_\_\_\_\_ days / weeks / months from the seventh day of the date of receiving work order.

THE TOTAL AMOUNT PUT TO TENDER = Rs. \_\_\_\_\_ (Rupees  
\_\_\_\_\_).

I/We have submitted Account Payee Demand Draft No. \_\_\_\_\_ dated \_\_\_\_\_ in favour of **IIT Kharagpur** payable at **Kharagpur** for Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) with the tender as **Cost of Tender Document**.

I/We have submitted Account Payee Demand Draft No. \_\_\_\_\_ dated \_\_\_\_\_ in favour of **IIT Kharagpur** payable at **Kharagpur** for Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) with the tender as **Earnest Money**.

I also declare that the information / documents furnished along with the application and tender are true and authentic to the best of my knowledge and belief. I am well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my tender / termination of contract at any stage besides liabilities towards prosecution under appropriate law. Each page of the tender document and papers submitted by my Company are authenticated, sealed and signed, and I take full responsibility for the entire documents submitted with this tender.

I/We agree that the period for which the tender shall remain open for acceptance shall not be less than **90 Days** from date of opening of tender.

Signature of the Tenderer / Authorised person

(Seal of the Tenderer)

**Witness :**

**Name of the Tenderer** \_\_\_\_\_

Signature : \_\_\_\_\_

(in Block letters)

Name : \_\_\_\_\_

Address : \_\_\_\_\_

(in block letters)

Address : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_