

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for "Repair & renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence at IIT Kharagpur."



INDIAN INSTITUTE OF TECHNOLOGY
KHARAGPUR, WEST BENGAL

TENDER DOCUMENT
FOR

Repair & renovation of MMM, LBS, Azad, Patel & Nehru Hall of
Residence at IIT Kharagpur.

PART – I: TECHNICAL BID

NOTICE INVITING TENDER NO. : SE(C)/IIT/TEN/2018-19/015
DATED : 08.05.2018

MAY 2018

Cost of Tender Document : Rs. 1000.00 (Non-Refundable)
Last Date & Time of Submission : 24.05.2018, upto 3:00 pm

CIVIL CONSTRUCTION & MAINTENANCE SECTION
IIT, KHARAGPUR,
WEST BENGAL

SUPERINTENDING ENGINEER (CIVIL)
IIT KHARAGPUR
योग: कर्मसु कौशलम्

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

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.....
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Issued on:

CCM Tender Sl. No. _____

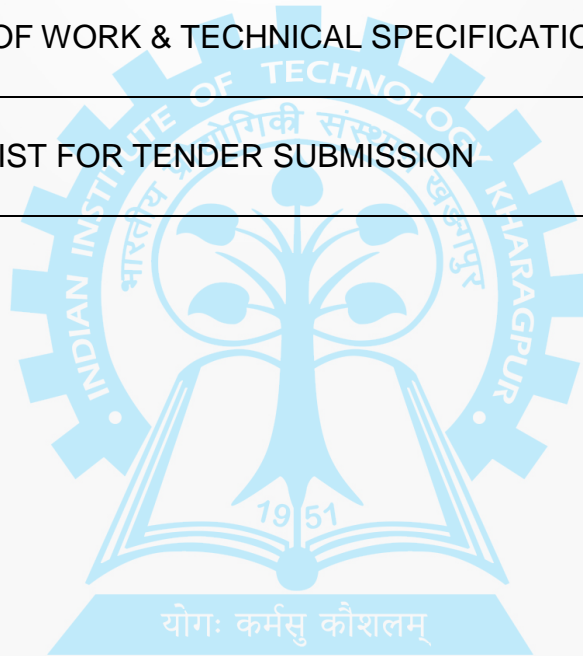
Dated _____

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NOTICE INVITING TENDER

The Superintending Engineer (Civil), IIT Kharagpur, invites sealed **Percentage 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 (₹) Exclusive of GST / all taxes.	Earnest Money Deposit (₹)	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 & renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence at IIT Kharagpur.	50,00,000.00	1,00,000.00	04 (Four) Months	09.05.2018 03:30 PM	24.05.2018 upto 03:00 PM	24.05.2018 at 3:30 PM

Cost of Tender Paper ₹ 1,000.00 (Rupees One Thousand only), **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 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

Repair & renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence as and when available within short notice at IIT Kharagpur. The agency shall make himself ready to take up the work within short notice. The works are extremely time bound. The work comprises of -

1. Civil Works (Major Component)/Sanitary and Plumbing Works/Road Works.

Eligibility Criteria

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

1. Agencies should have satisfactorily completed the works as mentioned below during the last 07 (Seven) years ending last day of the **April, 2018** :

- 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. Certificate from private individuals / private organizations shall not be accepted.

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>. *Corrigenda, if any shall be published only on Institute Website and Central Public Procurement Portal. 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. Rates quoted by the bidders should be exclusive of GST only. GST will be paid separately as per prevailing norms.* 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 has 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 (CCM)
- 3) Vice Chairman (CCM) - Civil
- 4) Sr.Executive Engineer (Civil)
- 5) Executive (CCM)
- 6) Asstt./Jr. Engineer (Civil)
- 7) Notice Board
- 8) Office file

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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 **04 (Four) Months** & will be reckoned from the 7th day from the date of issue of Work Order or handing over of site, whichever is earlier.
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 during the last 07 (Seven) years ending last day of **the April, 2018**:

- a) 03 similar works each costing not less than 40% of estimated cost, i.e. Rs. 20,00,000.00 or
 - b) 02 similar works each costing not less than 60% of estimated cost, i.e. Rs. 30,00,000.00 or
 - c) 01 similar work costing not less than 80% of estimated cost, i.e. Rs. 40,00,000.00
- executed under Central/State Government Department or Central/State Autonomous Body or Central/State Public Sector Undertaking. **Completion certificate** issued by Competent Authority will only be considered as credential.

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. Certificate from private individuals / private organizations for whom such works have been executed shall not be accepted.

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7. Submission of Bid

The bids shall be submitted in **Two Bid System** in **Three separate sealed envelopes**:

I. **Envelope-1 : Tender Fee and EMD** will comprise of -

- i) **Cost of Tender Paper** Rs. 1000.00, NON REFUNDABLE in the form of DD in favour of IIT Kharagpur, payable at Kharagpur (validity of DD should be at least 03 months from the date of publication of NIT). Tender without 'Cost of Tender Document' will be treated as cancelled.
- ii) **EMD** of requisite amount in the form of DD in favour of IIT Kharagpur payable at Kharagpur (validity of DD should be at least 03 months from the date of publication of NIT). Bid without EMD would be summarily rejected.

II. **Envelope-2 : Technical Bid** will comprise of -

- i) Self certified copies of 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.
- ii) Original Tender Document – Part-I: Technical Bid duly Stamped & Signed in all pages.
- iii) Self certified copies of Statutory documents like **Trade License, PAN, IT Return for last 3 (three) years, GST Registration details etc.**

III. **Envelope-3 : Financial Bid** will comprise of -

Original Tender Document – Part-II: Financial Bid with duly filled-up **Schedule of Quantities** and **Form of Tender** as an acceptance to the terms and conditions set in the tender (stamped & signed in all pages).

All the envelopes should be duly marked on top with **NIT Number, Name of work and Tender Fee & EMD / Technical Bid / Financial Bid** as the case may be and the **name of the bidder**. All these three envelopes to be put in another sealed large envelope duly marked on top with **NIT Number and Name of work** and **name of the bidder**. 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. Each and every page of the tender documents and correspondences accompanying the tender shall have to be duly signed and stamped by the Bidder / Authorised Signatory before submission. The person / officer signing the tender / bid should be the **Owner / Proprietor / Partner / CEO / MD / Director** of the company or delegated with an appropriate **Power of Attorney (duly endorsed by a Notary Public)** to sign such documents by the **Owner / Proprietor / Partner / CEO / MD / Director** of the company.
9. The bidder shall have to submit certified copies of valid Trade License, PAN, Income Tax Return for last 3 (three) years, GST registration details, other statutory tax clearance certificates (if any) and credential documents fulfilling the minimum eligibility criteria along with his tender. The original copies of these documents will have to be produced when demanded for verification.
10. All percentage/rates, Prices, Amounts and Sums quoted by the bidder shall be in Indian currency only. The language used throughout shall be English.
11. All Percentage/Rates/Amounts/Sums shall have to be quoted in indelible ink and written both in figures and words. If the rate/percentage quoted in words does not tally with the rate/percentage quoted in figures then the rate/percentage which corresponds to the lesser amount shall be considered.
12. Any overwriting / correction / applying correction fluid shall be avoided and in case any correction is made the same must be initialized and stamped.
13. 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.
14. 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.

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15. 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.
16. **The rates quoted by the tenderer should be exclusive of GST**, but inclusive of freight, cost for loading & unloading, other taxes, cess, duties, levies 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. **GST will be paid as per actual based on Government Notification.**
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 16th day to 30th 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.

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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. 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.
3. 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.
4. All temporary arrangements, staging, working platforms etc. is to be provided by the tenderer 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.
5. 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 metre. 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.
6. All concreting works 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.
7. 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.
8. The contractor will have to maintain the work for **SIX** calendar months from the certified date of its completion.
9. 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. Wherever these are silent, the construction and completion of works shall conform to sound engineering practice as approved by the Engineer-In-Charge. In case of any dispute arises out of the interpretation of the above, the decision of the Engineer-In-Charge shall be final and binding to the contractor.
10. The bituminous road work shall be carried out by using bitumen of grade VG30 preferably from IOCL wherever applicable.
11. **Roof treatment work / water proofing treatment work should be guaranteed by the contractor for 10 years after successful completion of work, wherever applicable.**
12. The splashes of paints over doors, windows and floor shall be cleaned thoroughly after execution of the work.
13. Irrespective of rates quoted by the bidder, the contractor shall be solely responsible for payment of *Minimum Wages* as stipulated by the Government from time to time.

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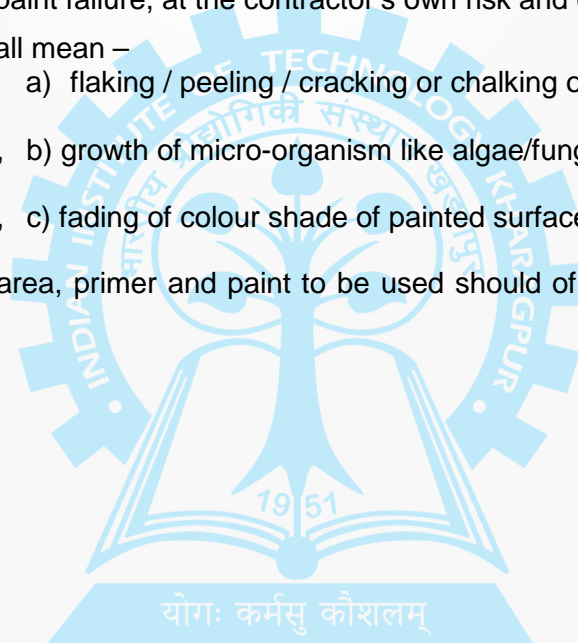
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14. For painting works-

- 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. 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.



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SCOPE OF WORK & TECHNICAL SPECIFICATION

The scope of work includes – *Repair & renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence at IIT Kharagpur.*

APPROVED MAKE LIST OF MATERIALS TO BE USED IN CIVIL, SANITARY & WATER WORKS

SL. NO.	ITEM	SUGGESTED BRAND NAME OR SIMILAR (APPROVED BY THE AUTHORITY)
01.	Cement (PSC)	ACC / Ultratech / Ambuja / Lafarge / Birla
02.	Reinforcement Steel	TATA / SAIL / RINL
03.a	Structural Steel	TATA / SAIL / RINL
03.b	Lighter Structural sections not manufactured by TATA/SAIL/RINL	Shyam Steel / SRMB / Jindal (Hissar)
04.	Ceramic Tiles	Johnson / Kajaria / Somany
05.	G.I. Pipes	TATA / Jindal
06.	G.I. Fittings	HB / R
07.	Extruded Aluminum sections / Grill	HINDALCO / INDAL / JINDAL
08.	P.V.C. Shutters	Sintex / Raunaq / Duroplast
09.	P.V.C. Pipes	Oriplast / Supreme / Finolex
10.	P.V.C. Cistern	Parryware / Hindware / Cera
11.	P.V.C. Closet Seat Cover	Parryware / Hindware / Cera / Prayag
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.	IPWC/EPWC/Urinal/Basin/Lab Sink	Parryware / Hindware / Cera
17.	SS Sink	Parryware / Cera / Nirali
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	NECO / BIC / D.N.Sinha / AMC / ALC
24.	Gun Metal Wheel Valve	Zoloto / Alto / Leader
25.	Mirror / Glass Panes	Modi Guard / Saint Gobain
26.	Wall Putty	JK / Birla / Sika
27.	Internal & External Paint and Primer	Asian Paints / Berger / AkzoNobel
28.	APP Membrane	SIKA / PIDILITE / FOSROC / TIKIDAN
29.	Anti corrosive water proofing paint with Aluminium finish	SIKA / Shalimar
30.	Flush Door	Green Ply / Century Ply

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31.	Architectural Hardware fittings	
	a) MS	Mowjee
	b) Anodized Aluminium	Allen / Metco / N.L.C.O.
32.	SS Railing Sections	Ozone / D-Line / Jindal
33.	Interlocking Paver Tiles	Hindustan Tiles / Wonder / Ultra Tiles
34.	Sunken floor water proofing	Choksey / Sika / BASF/ Fosroc
35.	Gypsum False Ceiling	Gyprock / Armstrong
36.	PVC Flooring	Responsive / Armstrong / Wonder Floor / Tarkett
37.	Polysulphide Sealant	Pidilite / Fosroc / Choksey / Sika / BASF
38.	Polycarbonate Sheets	GE / Macrolux / Polytechno / Danpalon
39.	Vitrified Tiles (double charged or fully vitrified)	Johnson, Somany, Kajaria
40.	Stainless steel D-handles	Godrej, Hettich, D-line, Dorma, Dorset, Ozone
41.	Door Locks	Godrej, Dorma
42.	Weather Silicon	Pidilite, Choksey, Forsoc, Sika
43.	Aluminium Cladding sheets	Alstrong, Alpolic, Alucobond, Alstone International, Aludecor Lamination
44.	Water proofing / Injection Grouting	Fosroc, Choksey, Sika, BASF
45.	Ply board	Greenply, Kitply, Century
46.	Door Closer/Floor spring	Godrej, Ozone, Hettich, Dorma, Hardwyn
47.	Bitumen (grade VG30)	IOCL

Note: For items not covered in the above list or in case of non-availability of preferred make of any item listed above, the make / brand to be used in the work, should have prior approval from the Engineer-In-Charge.

योग: कर्मसु कौशलम्

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CHECKLIST FOR TENDER SUBMISSION (TWO-BID)

(To be filled by the Tenderer by putting "✓" and to be signed & stamped)

Sl. No.	Description	Yes	No
1	Submitted requisite Tender fee		
2	Submitted requisite EMD		
3	Each pages of the tender document duly signed & stamped		
4	Form of Tender properly signed, stamped and enclosed with Financial Bid		
5	Financial Bid filled up with quoted prices (% above / below / at par) with proper Signature & Stamp		
6	Tender fee & EMD submitted in separately sealed envelope and duly marked on top with "NIT Number:", "Name of work:" and "Tender Fee & EMD"		
7	Technical Bid & Financial Bid submitted in separate sealed envelope and duly marked on top with "NIT Number:", "Name of work:" and "Technical Bid" / "Financial Bid" as the case may be and the "Name of the bidder :"		
8	All the three Envelopes put in another sealed Envelope duly marked on top "NIT Number:" , "Name of work:" and the "Name of the bidder :"		

Name of the Bidder: _____

(In Block letters)

Signature: _____

Address: _____

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KHARAGPUR, WEST BENGAL

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FOR

Repair & renovation of MMM, LBS, Azad, Patel & Nehru Hall of
Residence at IIT Kharagpur.

PART – II: FINANCIAL BID

NOTICE INVITING TENDER NO. : SE(C)/IIT/TEN/2018-19/015
DATED : 08.05.2018

MAY 2018

Last Date & Time of Submission : 24.05.2018, upto 3:00 pm

CIVIL CONSTRUCTION & MAINTENANCE SECTION
IIT, KHARAGPUR,
WEST BENGAL

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 & renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence at IIT Kharagpur."

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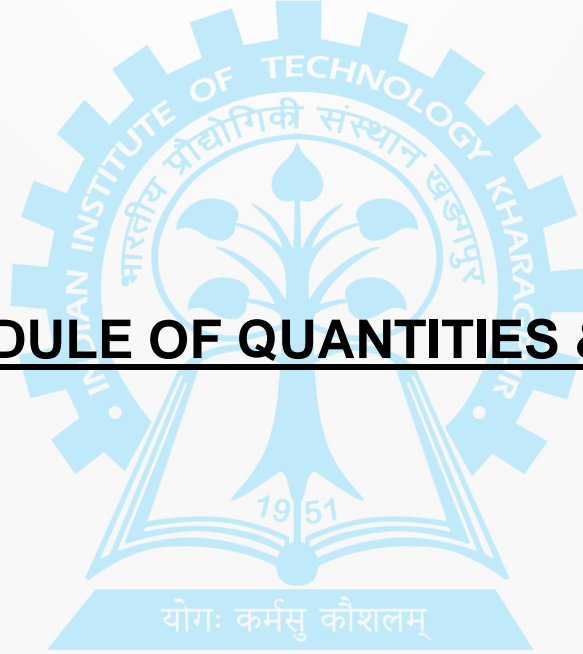


INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for "Repair & renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence at IIT Kharagpur."



SCHEDULE OF QUANTITIES & RATES



**CIVIL CONSTRUCTION AND MAINTENANCE SECTION
IIT KHARAGPUR**

**Name of Work : Repair & Renovation of MMM, LBS, Azad, Patel & Nehru Hall of Residence at
IIT Kharagpur.**

SCHEDULE OF QUANTITIES & RATES

Part :A (Civil Works)				
Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
1	Clearing compound premises of shrubs, plants jungles etc. by cutting and removing as directed (Specific permission of Engineer-in-Charge prior to execution will be necessary). (Payment to be made on area cleared)	Sq.M	R.O.	11.00
	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.	Sq.m.	R.O.	10.00
	Uprooting and removing plants from the surface of walls parapet etc and making good damages. Repairing of damages to be paid separately.			
2	(a) Small plant of girth of exposed stem upto 75 mm lift unto 6 metre.	Each	R.O.	50.00
	(b) Medium size plant of girth of exposed stem above 75 mm but not exceeding 150 mm lift unto 6 mtr.	Each	R.O.	60.00
3	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.	Cu.M	R.O.	447.00
4	Dismantling all types of plain cement concrete works, stacking serviceable materials at site and removing rubbish as directed within a lead of 75 m. upto 150 mm. thick	Cu.M	R.O.	939.00
5	Dismantling R.C. floor, roof, beams etc. including cutting rods and removing rubbish as directed within a lead of 75 m. including stacking of steel bars.In any floor.	Cu.M	R.O.	1956.00
6	Dismantling artificial stone flooring upto 50 mm. thick by carefully chiselling without damaging the base and removing rubbishes directed within a lead of 75 m.	Sq.M	R.O.	50.00
	Dismantling chunar/kota stone flooring carefully including removing rubbish within a lead of 75 m. stacking the serviceable materials as directed.	Sq.M	R.O.	35.00
7	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or staking the spoils within a lead of 75 m as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water as required complete. Depth of excavation not exceeding 1,500 mm.	Cu.M	R.O.	119.27
8	Filling in foundation or plinth by fine sand in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water ramming complete including the cost of supply of sand. (Payment to be made on measurement of finished quantity).	Cu.M	R.O.	509.85
	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)			
	(i) With earth obtained from excavation of foundation.	Cum	R.O.	77.540

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
	(ii) With carried earth arranged by the contractor within a radius of 3 km. including cost of carried earth.	Cum	R.O.	355.410
9	Supplying , spreading and consolidating moorum with requisite depth including consolidating by power roller to proper grade and camber including watering, guarding, barricading and making necessary earthen bundh to protect the edges and pouring water, mending cracks by rolling etc. The rate includes the supply of moorum, carriage, loading, unloading and stacking at road side and spreading including all incidental charges of roller, cost of fuel & lubricants etc. all complete. (The payment will be made after deduction of 1/13th for the shrinkage).	Cu.M	R.O.	445.64
10	Supplying, stacking, spreading & consolidating rubbish to a reuisite depth of 100mm at desir density as per specification Engg-in-Charge. Complete as per specification. (The payment will be made after deduction of 1/ 9th for the shrinkage)	Cu.M	R.O.	182.00
11	Cement concrete with graded stone ballast (40 mm size excluding shuttering), Pakur Variety, 1:4:8 proportion .	Cu.M	R.O.	4841.00
12	Cement concrete with graded stone ballast (40 mm size excluding shuttering) [Pakur Variety] (1:3:6 proportion)	Cu.M	R.O.	5128.00
13	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, as per IS 456-2000. Pakur Varity.	Cu.M	R.O.	5236.00
14	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, as per relevant IS codes. Pakur Variety	Cu.M	R.O.	5791.00
15	Hire and labour charges for shuttering with centering and necessary staging unto 4 m 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 all floors and levels. (When the height of a particular floor is more than 4 m the equivalent floor height shall be taken as 4m and extra for works beyond the initial 4m ht. shall be allowed under (c) for every 4m for part thereof)			
	a) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-in-Charge,	Sq.M	R.O.	321.00
	b) 25 mm to 30 mm thick shuttering without staging in foundation	Sq.M	R.O.	203.00
	c) Extra for staging beyond 4 m in any floor (Mode of measurement: area in plan x mean height of staging upto soffit of shuttering above initial 4 m)	Cu.M	R.O.	58.00
	d) Shuttering with hard wood for precast R.C. Slab curved, or stright and striking out the same including fitting, fixing the precast slab in position with necessary carriage & haulage, hosting etc, complete in all respect. (only the area in contact with concrete to be measured)	Sq.m	R.O.	92.00
16	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 at any level of superstructure with Tor steel of SAIL/ TATA/RINL make.	M.T.	R.O.	58103.00
17	R.C. shelves (1:1.5:3) either precast or cast in situ with stone chips and necessary reinforcement unto 1% (0.8% main and 0.2% distribution bars), shuttering etc. and 10 mm thick cement plaster (1:4) including neat cement finishing and cutting chase fitting and fixing in position. mending good damages as necessary complete. 50 mm Thick panels	Sq.M	R.O.	985.00
	Brick work with 1st class bricks in cement mortar (1:6)			

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
18	a) In Foundation and plinth	Cu.M	R.O.	5103.00
	b) In Superstructure at any level	Cu.M	R.O.	5325.00
19	a) 125 mm. thick brick work with 1st class bricks in cement mortar (1:4) at any level.	Sq.M	R.O.	701.00
	b) Extra for using approved H.B. netting in every third layer in any floor	Sq.M	R.O.	41.00
20	Brick work with Fly Ash Bricks (230 X 110 X 70 size) set in cement sand mortar (1:6) including raking out joints, curing, scaffolding etc. complete in all respect. In All flors	Cu.M	R.O.	4676.00
21	100 mm thk brick work with Fly Ash Bricks set in cement sand mortar (1:4) including raking out joints, curing, scaffolding etc. complete in all respect.	Sq.M	R.O.	539.00
15	Providing and laying autoclaved aerated cement blocks masonry with 150mm/200mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineerin-Charge. (The payment of RCC band and reinforcement shall be made for seperately).	Cum	R.O.	5,687.10
22	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, noising and drip course, scaffolding/staging where necessary .			
	a) With 1:6 cement mortar 20mm thick	Sq.M	R.O.	178.00
	b) With 1:4 cement mortar 15mm thick	Sq.M	R.O.	152.00
	c) With 1:4 cement mortar 10mm thick	Sq.M	R.O.	122.00
23	Stripping of worn out plaster and racking out joints of walls, ceilings etc.upto any height and in any floor including removing rubbish within a lead of 75 m as directed.	Sq.M	R.O.	19.00
25	Renewing throating, noising or drip course moulding with 15 mm. thick cement plaster(1:4), complete (Cement 0.7 kg/Mtr.)	Mtr	R.O.	17.00
24	Supplying and laying true to line and level vitrified tiles of approved brand (size not less than 600 mm X 600 mm X 10 mm thick) in floor, skirting etc. set in 20 mm sand cement mortar (1.4) and 2 mm thick cement slurry back side of tiles using cement @ 2.91 Kg/M ² or using polymerised adhesive (6 mm thick layer applied directly over finished artificial stone floor /Mosaic etc without any backing course) laid after application slurry using 1.75 Kg of cement per M ² below mortar only, joints grouted with admixture of white cement and colouring pigment to match with colour of tiles / epoxy grout materials of approved make as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials, labour and all other incidental charges complete true to the manufacturer's specification and direction of Engineer -in-Charge (White cement, synthetic adhesive and grout material to be supplied by the contractor)			
	a) With application slurry @ 1.75 kg/Sq.m sand cement mortar (1.4) & 2 mm thick cement slurry at back side of tiles, 0.2 kg/ Sq.m white cement for joint filling with pigment in Light Colour Tiles.	Sq.M	R.O.	1261.00
	b) With Polymerised Adhesive [6 mm thick] & epoxy grouting materials for filling joints including spacer-2 mm [Applied directly over finished artificial stone floor/ mosaic etc.] in Light Colour Tiles.	Sqm	R.O.	1369.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
25	Supplying fitting & fixing granite slab 15 mm to 18 mm thick in columns, wall, fascia etc. with 15 thick [avg] cement mortar (1:2) including making suitable arrangements to hold the stones properly by brass / copper hooks including pointing in cement mortar (1:2) (1 white cement :2 marble dust) with admixture of pigment matching the stone shades all complete as per direction of the Engineer-in-charge including cost of all materials, labours, scaffolding, staging , curing and roughening of concrete surface complete with Area of each slab upto 0.2 sq.m.	Sq.M	R.O.	2307.00
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 and pointing @ 2.0 kg /sq.m]	Sq.M	R.O.	1002.00
27	Supplying fitting and fixing Black Stone slab used in Kitchen slab, alcove, wardrobe etc. laid and jointed with necessary adhesive Cement mortar (1:2) including grinding or polishing as per direction of Engineer-in-Charge. Slab thickness 20 to 25 mm.	Sq.M	R.O.	642.00
28	a) Polishing only of old marble or terrazo work with oxalic acid powder using 33 gms/ sq.m. by manual labour / machine where necessary	Sq.M	R.O.	38.00
	b) Washing and cleaning with oxalic acid powder using 33 gms./sq.m, Other than marble	Sq.M	R.O.	5.53
29	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 sand cement mortar (1:4) 20 mm thick & 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg/Sq.m & joint filling using white cement slurry @ 0.20kg/Sq.m & joint filling using white cement slurry @ 0.20kg/Sq.m, Area of each tile upto 0.09 sq.m, Coloured decorative .	Sq.M	R.O.	690.00
	(b) Wall : With Sand Cement Mortar (1:3) 15 mm thick & 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg/Sq.M & joint filling using white cement slurry @ 0.20 kg/Sq.M, Area of each tile upto 0.09 Sq.M (i) Coloured decorative	Sq.M	R.O.	738.00
	(C) Wall : With Sand Cement Mortar (1:3) 15 mm thick & 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg/Sq.M & joint filling using white cement slurry @ 0.20 kg/Sq.M, Area of each tile upto 0.09 Sq.M, Coloured Plain including white as per instruction of Engineer-in-charge.	Sq.M	R.O.	696.00
30	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 with 3 mm. thick topping (High polishing grinding on this item is not permitted with ordinary cement).			
	a) 20 mm thick	Sq.M	R.O.	235.00
	b) 25 mm thick	Sq.M	R.O.	267.00
	c) 35 mm thick	Sq.M	R.O.	328.00
31	Neat cement punning about 1.5 mm thick in wall, dado, window, sills, floor, drain etc.	Sq.M	R.O.	34.00
	Supplying and laying Polythene Sheet (150gm / sq.m.) over damp proof course or below flooring or roof terracing or in foundation or in foundation trenches.	Sqm	R.O.	24.000

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
32	Concrete Chowkat with rabbet (in sill of door or window) made with cement concrete (1:2:4) and finished with 15 mm. thick cement plaster (1:4) and neat cement punning complete: With rabbet on one side 75 mm X 50 mm or 75 mm X 75 mm. section (Cement 3.7Kg/Mtr.)	Mtr	R.O.	67.00
33	(a) Scraping and removing greasy soot from walls or ceiling of kitchen or similar smoke affected rooms and preparing the surface.	Sq.M	R.O.	11.00
34	(b) Scraping of moss, blisters etc.thoroughly from exterior surface of walls necessitating the use of scraper, wire brush etc. (Payment against this item will be made only when this has been done on the specific direction of the Engineer-in-charge)	Sq.M	R.O.	7.00
35	Removing old scales, blisters etc. of interior surface of walls,ceiling by scraping etc. and preparing smooth and even surface with rendering or cement mortar (1:2) (as necessary), to make the surface suitable for receiving distemper. (Payment against this item will be made only when this has been done on the specific direction of the Engineer-in-charge).	Sq.M	R.O.	10.09
36	White washing including cleaning and smoothing surface thoroughly. All floors:			
	One coat	Sq.M	R.O.	13.09
	Two coats (to be done on specific instruction).	Sq.M	R.O.	18.14
	Colour washing with "ELLA" with a coat of white wash priming including cleaning and smoothening surface thoroughly: Internal (all floors) .	Sq.M	R.O.	14.37
37	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 specification and as per direction of the EIC. One Coat , Water based interior grade Acrylic Primer	Sq.M	R.O.	30.80
38	Acrylic Distemper to interior wall, ceiling without primer (as per manufacturer's specification) including cleaning and smoothening of surface.	Sq.M	R.O.	36.30
39	Applying decorative cement based paint of approved quality after preparing the surface including scraping the same thoroughly (plastered or concrete surface) as per manufacturer's specification.			
	(i) One coat on old surface.	Sq.M	R.O.	31.00
	(ii) One coat on new surface.	Sq.M	R.O.	34.00
	(iii) Two coats.	Sq.M	R.O.	49.00
40	Applying plastic emulsion of approved make and brand on walls and ceiling including sand papering in immediate coats including putty (to be done under specific instruction). One coats	Sq.M	R.O.	30.00
41	Applying Acrylic emulsion paint of approved make and brand on walls and ceiling including sand papering in immediate coats including putty (to be done under specific instruction of Engineer-in-Charge). Two coats of Standard Quality.	Sq.M	R.O.	62.00
42	Rendering the surface of walls and ceiling with plaster of pairs (thickness not less than 1.5 mm.)	Sq.M	R.O.	60.00
43	Rendering the Surface of walls and ceiling with White Cement base WATER PROOF wall putty of approved make & brand.(1.5 mm thick)	Sq.M	R.O.	122.00
44	Making one set of scaffolding only for replacing glass panels, painting, uprooting plant and another repairing works of building and S&P works for external works only with 10 cm. dia bamboo as main posts at the rate of 1 metre centre to centre and 7.5 cm. dia bamboo ties @ 0.75 metre apart fitting and fixing with necessary coir, nails etc. as per direction of the Engineer-in-charge. (This item should be executed only after prior approval of the Engineer-in-charge). Firstly, one number to be paid and then labour rate for shifting up to further nineteenth (19) times @ 10% each time to be considered. If necessary further after twenty times of total use, another one number new and labour rate for shifting to be considered accordingly.			

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
	For height above 3.9m or part thereof	Each	R.O.	245.00
45	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or concrete surface old or new surface to receive decorative textured(matt finish) or smooth finish acrylic exterior emulsion paint including scraping and preparing the surface throughly, complete as per manufacturer's specification and as per direction of the EIC.: One Coat	Sq.M	R.O.	31.40
46	Protective and Decorative Acrylic exterior emulsion paint of approved quality, as per manufacturer's specification and as per direction of EIC to be applied over acrylic primer as required. The rate includes cost of material, labour, scaffolding and all incidental charges but excluding the cost of primer. (Two Coat) , Normal Acrylic Emulsion,	Sq.M	R.O.	67.00
47	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc. at all floors and levels.	Sq.M	R.O.	38.00
48	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc. at all floors and levels. (This item is applicable to new work or old work when the original surface has been exposed by removal of old paint.)	Sq.M	R.O.	29.00
49	(A) 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 timber or plastered surface : With super glass (hi-gloss) (with any shade except white)			
	One Coat	Sq.M	R.O.	48.00
	Two Coat	Sq.M	R.O.	75.00
50	(B) 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 : With super glass (hi-gloss) (with any shade except white)			
	One coat (with any shade except white)	Sq.M	R.O.	46.00
	Two coats (with any shade except white)	Sq.M	R.O.	72.00
51	Sealing cracks on roof, wall, chajja etc. with valamoid with similar plastic bitumen compound after cleaning all dust and dirt, then filling with Valamoid using the finger dipped in kerosin oil pressing tightly as fitting completely in level of adjoining areas. Rate includes supplying of materials and labour charges .	Kg	R.O.	65.11
52	Applying 2 coats of bonding agent with synthetic multi functional rubber emulsion having adhesive and water proofing properties by mixing with water in proportion (1 bonding agent : 4 water :6 cement) as per Manufacturer's specification .	Sq.M	R.O.	88.00
53 a)	Repair to plaster of thickness 12mm to 20 mm in patches of area 2.5 sqm and under, including cutting the patch in proper shape, raking out joints and preparing plastering the wall surface with white cement based polymer modified self curing mortar, including disposal of rubbish, all complete as per the direction of Engineer-In-Charge.	Sqm	R.O.	368.900
b)	Providing and laying four course water proofing treatment with bitumen felt over roof consisting of 1st and 3rd courses of blow bitumen grade 30/40 of approved brand aplied hot.@1.45 kg/sqm of area for each course, second course of roofing felt type 3 grade - I. (hessian base self finished bitumen felt) manufactured by STP/equivalent of approved brand Ltd. etc. and fourth and final course of stone grit 6 mm and down size or pee sized gravel spread at 6 cum. per sqm. including excluding grading complete with bitumen felt.	Sq.M	R.O.	247.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
54	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 of approved make, 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.	R.O.	466.000
55	Painting of oxidised bitumen anti-corrosive water proofing paint of approved make with aluminium finish over APP surface as per manufacturer specification.	Sq.m.	R.O.	46.000
56	Painting roof surface with bitumen 30/40 grade @1.35 kg/sqm including cleaning roof surface and spreading medium sand @ 0.6 cum/ % sqm complete including the cost of sand and cost of bitumen and carriage and labour charges .	Sq.M	R.O.	96.56
57	Preparation of drainage spout on roof for bituminous waterproofing treatment after required grading and shaping of the under bed with Cement Concrete (1:2:4) or Cement Mortar (1:4) as directed, Chamfering and moulding the parapet wall to form a bell mouth entry, if required and providing full course treatment with bituminous felt to facilitate quick and smooth drainage of watwr into the down pipes complete including cost of all materials and labour according to satisfaction of the Engineer - in - Charge.	Each	R.O.	113.000
58	a) Making necessary holes on the base slab and walls using drill machine and fixing 12mm dia. threaded nozzle of required length at a spacing of 1 Mtr C/C	Sq.M	R.O.	8.40
	b) Providing and applying pressure grouting operation with compressor pump and injecting cement slurry admixed with NSG compound and injecting each point till refusal. Removal of nozzles and sealing them with cement admixed with acrylic polymer.	Sq.M	R.O.	250.00
59	Supplying best Indian sheet glass panes set in putty and fitted and fixed with nails and putty complete in all floors and for internal and external wall.			
	a) 3 mm thick (weighing 7.4 kg/sq.m)	Sq.M	R.O.	477.00
	b) 4mm thick	Sq.M	R.O.	536.00
	Supplying best Indian figured glass viz. hammered, fluted, ribbed, pinhead etc. type including cutting to required sizes, setting on putty bases and fitted and fixed with nails and putty complete in all floors for internal wall & upto 6 m height for external wall.			
	a) 3 mm thick (white)	Sq.M	R.O.	417.00
	Supplying bubble free float glass of approved make and brand conforming to IS: 2835-1987. 4mm thick clear glass.	Sqm.	R.O.	398.00
60	Renewing worn out putty of glass panes:		R.O.	
	(a) Panes not exceeding 0.2 Sq.m	Each		33.00
	(b) Panes exceeding 0.2 Sq.m but not exceeding 0.5 Sq.m	Each		51.00
61	Iron hasp bolt of approved quality fitted and fixed complete (oxidised) with 16mm dia rod with centre bolt and round fitting. 300mm long	Each	R.O.	166.00
62	Iron socket bolt of approved quality fitted and fixed complete.			
	a) 100mm long X 10mm dial bolt.	Each	R.O.	40.00
	b) 150mm long X 10mm dial bolt.	Each	R.O.	63.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
	c) 300mm long X 10mm dial bolt.	Each	R.O.	95.00
63	Iron catch hook of approved quality fitted and fixed to shutter and chowkat. 6mm dia. X 100 mm long	Each	R.O.	36.00
64	(a)Iron butt hinges of approved quality fitted and fixed with steel screws, with ISI mark.			
	i) 100mm. X 58mm. X 1.90mm.	Each	R.O.	43.00
	ii) 75mm X 40mm X 1.12mm	Each	R.O.	28.00
	(b) Anodised aluminium butt hinges of approved quality manufactured from extruded section conforming to I.S. specification (I.S. 205/66) and fitted and fixed with cadmium plated screws:in any floor complete in all respect of size :75 x 45 x 2.5mm.			52.00
65	Iron door handle or approved quality fitted and fixed complete:100mm X 5mm	Each	R.O.	40.00
66	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)			
	a) 100mm grip X 10mm dia. bolt.	Each	R.O.	69.00
	b) 150mm grip X 10mm dia. bolt.	Each	R.O.	97.00
67	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.			
	a) 100mm long x 10mm dia. bolt..	Each	R.O.	53.00
	b) 150mm long x 10mm dia. bolt.	Each	R.O.	63.00
68	Anodised aluminium Aldrop /Sliding boots of approved quality manufactured from extruded section conforming to I.S specification (I.S. 2681/66) fitted and fixed complete. 250mm long X 16mm dia. bolt.	Each	R.O.	233.00
69	Supplying , fitting and fixing Door Stopper			
	a) Door stopper (Anodised aluminium)	Each	R.O.	70.00
	b) Steel body door stopper	Each	R.O.	67.00
70	(a)Renewing steel plated or oxidised peg stay of steel window frames including painting two coats with approved paint complete.	Each	R.O.	71.00
	(b) Supplying , fitting and fixing or renewing (taking out the old and refixing the new) 250mm long approved quality heavy type Aluminium window Peg Stay (Natural White) at steel window frames in any floor complete in all respect.			55.00
71	Renewing two point steel plated or (oxidised) handle of steel doors and windows as directed including painting complete.	Each	R.O.	66.00
72	(a)Renewing M.S. clamps for door and window frame made of flat bent bar, end bifurcated with necessary screws etc. in cement concrete (1:2:4) including cutting of brick work/concrete work as per direction (Cost of concrete will be paid separately) 40mm X 6mm, 125mm Length	Each	R.O.	20.00
	(b)Supplying, fitting and fixing or Renewing M.S. clamps 40mm X 6mm, 125mm Length for door and window frame made of flat bent bar, end bifurcated with necessary screws etc. in cement concrete (1:2:4) including cutting of brick work/concrete work as per direction including of concrete in any floor complete in all respect.	Each	R.O.	38.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
73	(a) PVC Door Shutter: 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 mm x 19 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 75 mm 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 mm x 2) 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. x 15 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 any floor complete in all respect.	Sq.M	R.O.	1943.00
	(b) PVC Door Shutter: Supplying fitting and fixing P.V.C. door shutter of approved quality & shade in position, the style & rail of the P.V.C. Door shutter will be made of rigid P.V.C multicavity hollow chamber of suitable size and section with 2.0 mm (± 0.2 mm) wall thickness, the section will have 2 nos. built in beads, horizontal & vertical section shall be fixed to each other by self tapping screws and 2 nos. of solid plastic or M.S tubular galvanized brackets of length 200 mm X 80 mm and other 100 mm X 100 mm both 1.20 mm in each corner of the shutter frame for placing hinges. Polymer based multicavity hollow section of 105 mm X 37 mm with 2.0 mm (± 0.2 mm) wall thickness will be fitted in the middle as lock rail reinforced by solid polymer bar of 200 mm long at ends & screws for both sides. the section frame will then be fitted in by prepanels of size 100 mm X 20 mm with wall thickness 1.2 mm (± 0.2 mm) and 2 nos of 6 mm dia bright rod will be inserted horizontally with both side check and nut system and stretches where fixing of hinges /hasp bolt/tower bolt/door ring are required to be strong enough to with stand wear and tear. the rate is inclusive of cost of all materials, labour, and hire of tools and plants and			
	i) 37 mm thick	Sq.M	R.O.	2287.00
	ii) 30 mm thick:	Sq.M	R.O.	2127.00
	(c) PVC Door Shutter: Providing and fixing 37 mm thick factory made PVC Door shutter, styles and rails made of PVC hollow extruded printed and laminated section having overall dimension 115 mm x 37 mm with wall thickness 2 mm (± 0.2 mm) with inbuilt beading on one side, the styles and rails mitred cut and joint at corners by inserting 2 nos PVC profile reinforcement of size 75 mm x 200 mm long with cross section size of 28 mm x 30 mm having wall thickness 2 mm (± 0.2 mm). Styles, rails and reinforcements to be fusion welded together. Only hinge side vertical style to be reinforced with PVC profile reinforcement in full length. Printed and laminated PVC lock rail of size 110 mm x 37 mm having wall thickness 2 mm (± 0.2 mm) to be welded horizontally with the vertical styles after inserting PVC profile reinforcement as in styles and rails, providing with PVC snap fit beading, panels of 100 x 20 mm printed & laminated and inserting 2 nos 6 mm dia bright steel rod horizontally with both side threaded and tightened with check nuts and washers complete, all as per manufacturer's specification and direction of engineer-in-charge.	Mtr.	R.O.	3200.100
(a) PVC Door Frame : Supplying, Fitting & Fixing Factory made PVC door frame of size 50 mm X 47 mm with a wall thickness of 5 mm, made out of extruded 5 mm, PVC sheet miter cut at two corners and joined with two nos of 1.5 mm long brackets of 15 mm X 15 mm M.S. square tube. The two vertical door profiles are to be reinforced with 19 mm X 19 mm M.S. Square tube of 19 gauge, weather seal to be provided through out the frame. The door frame shall be fixed with the wall using 65/100 mm long M.S. Screws through the frame by using P.V.C fasteners. A minimum of 4 Nos of screws to be provided for each vertical member and minimum 2 Nos for horizontal member etc. complete as per Manufacturer's specification and direction of Engineer-in-Charge.	Mtr	R.O.	305.00	

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
74	(b) PVC door frame : Supplying fitting and fixing in position approved P.V.C. door frame (Matt finish) made of extruded P.V.C. multichamber hollow section having dimensions 60mm x 50mm x 2mm (+/- 0.2mm), horizontal section will be joined with vertical section by galvanised steel screws after inserting two number steel brackets as reinforcement making suitable space for placing hinges, one steel tube 40mm x 20mm x 1.20 mm will be inserted on one full vertical side of the frame (hinge side) as reinforcement, the frame will then be fixed in the opening with the help of P.V.C. expandable fastner/wooden gutties and galvanised steel screws including cost of all materials and labour, hire charges of tools and appliances, carriage of all materials, taxes and all other incidental charges in any floor complete in all respect.	Mtr	R.O.	279.00
	(c) PVC door frame : Providing and Fixing factory made PVC door frame made of PVC extruded sections of size 75 mm x 53 mm, having wall thickness 2.0 mm (± 0.2 mm). Both verticals sides of the frame reinforced with PVC profile of cross section size 28 mm x 30 mm x 2 mm thickness (± 0.2 mm) and 75 mm x 200 mm long, including reinforcing both ends of the top frame with PVC profile. PVC Door Frame and PVC reinforcement profile to be mitred cut, jointed and fusion welded together, including providing and fixing 3 nos of 125 mm long stainless steel hinges to frame, fixing the frame with jamb with required nos & sizes of anchor dash fastener, all complete as per manufacturer's specification and direction of engineerin-charge.	Sqm.	R.O.	472.35
75	Wood work in door and window frame fitted and fixed in position complete including a protective cost of painting at the contact surface of the frame excluding cost of concrete, iron Butt Hinges and M.S. clamps. (The quantum should be corrected upto three decimals). Sal : Local	Cu.M	R.O.	72954.00
76	Labour for taking out door and window frame including shutter for repair or replacement of different parts of the frame & prefixing the same including mending good all damages complete. (Concrete and brick work for mending damage will be paid separately) Upto area 2.5 Sq.m	Sq.M	R.O.	119.00
77	(i) Taking out door and window shutters and rehangng the same with old fittings. With new iron screws.	Sq.M	R.O.	78.00
	(ii) Taking out door and window shutters and rehangng the same with old fittings. With old screws in any floor complete in all respect.	Sq.M	R.O.	66.00
78	Taking out shutter of door and window, dismantling by parts (For repair or replacement of damaged parts), reassembling and refitting and rehangng same with old fittings but with new screws as necessary (Where different parts of same shutter are renewed under different item.	Sq.M	R.O.	126.00
79	Glazed shutters of doors window, fan light, clerestory windows etc. As per design (with ordinary glass of 7.4kg /sq.m. 3mm Thick) fitted with putty bad and teak wood bead and nails including fitting and fixing shutter in position but excluding the cost of hinges and other fittings, cost of glass, putty, wooded beads etc. which will be paid separately. 35mm thick shutters. Sishu, Gamar, Champ, Badam, Bhola, Mogra, Hallak.	Sq.M	R.O.	2642.00
80	Styles and rails of wooden shutters fitted and fixed complete. (Payment to be made on area of new work only) : 35m Thick shutter. Sishu, Gamar, Champ, Badam, Bhola, Mogra, Hallak.	Sq.M	R.O.	2178.00
81	Panel (Made of single plank) of door and window shutters to design as directed : 19mm Thick panel of 30cm to 45cm width with Sishu, Gamar, Champ, Badam, Bhola, Mogra, Hallak.	Sq.M	R.O.	1118.00
82	Panel shutters of door and window, as per design (each panel consisting of single plank without joint). Including fitting and fixing the same in position but excluding the cost of hinge and other fittings. (In case of non-supply of single plank, panel rate of reduction of 20% will be made) 35mm thick shutters with 19mm thick panel of size 30 to 45 Cm. Champ, Hallok, Sisu, Badam.	Sq.M	R.O.	2789.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
83	Z-batten shutters of door and window as per design having tongued and groove-half lap jointed as per direction of the Engineer-in-charge including fitting and fixing shutter in position, but excluding the cost of hinges and other fittings. Shutter with 25mm thick planks, 19mm thick battens. Sishu, Gamar, Champ, Badam, Bhola, Morga, Hallak.	Sq.M	R.O.	2616.00
84	Fly proof shutters as per design with galvanized netting 256 mesh per sq.inch/22 gauge of approved quality including fitting and fixing shutters in position but excluding the cost of hinges and other fittings : 35 mm thick shutters. Sishu	Sq.M	R.O.	1039.50
85	Renewing of netting only of fly-proof shutters with new beads where necessary (netting to be approved quality)	Sq.M	R.O.	189.00
86	Rough dressed timber planks fitted and fixed with nut bolts excluding framework complete. 25 mm thick planks Sal Local.	Sq.M	R.O.	1503.00
87	Easing door and windows and keeping operational for minimum six months.	Each	R.O.	17.00
88	Taking old suitable wooden shutter from departmental store and refixing the same after cutting, jointing & making to to requisite size with all necessary fittings at any level & place.	Each	R.O.	190.00
89	Supplying solid flush type doors of commercial quality, the timber frame consisting of top and bottom rails and side styles of well seasoned timber 65mm wide each and the entire frame fitted with 37.5mm wide battens places both ways in order to made the door of solid core and internal lipping with Garjan or similar wood veneers using phenol formaldehyde as glue etc. complete, including fitting, fixing the shutters in position but excluding the cost of hinges and other fittings in any floor. 35 mm thick shutters (single leaf).	Sq.M		
	(a) 35 mm thick shutters (single leaf).		R.O.	2659.00
	(b) 32 mm thick shutters (single leaf)		R.O.	2359.00
90	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.Flash butt welded windows and ventilators, (No shop priming will be allowed to facilitate inspection of workmanship), Without integrated grillsm in any floor complete in all respect.		R.O.	
	(a)Fixed type steel windows with or without ventilators(Fixed type,Top hung ,side hung ,Centre hung ventilators as per direction of engineer-in-charge) as per IS sizes with horizontal glazing bars.	Sq.M	R.O.	1214.00
	(b)Openable steel windows with or without ventilators(Fixed type,Top hung ,side hung ,Centre hung ventilators as per direction of engineer-in-charge) as per IS sizes with side hung shutters and horizontal glazing bars.	Sq.M	R.O.	1663.00
	(iv) Two point nose steel handle including fitting and fixing	Each	R.O.	34.00
	(v) Two point nose aluminium handle including fitting and fixing.	Each	R.O.	40.00
	(vi) steel peg stay 300 mm long including fitting and fixing.	Each	R.O.	25.00
	(vii) M.S. integrated grill as per approved design integrated with steel window or ventilator, joints continuously welded with M.S. flats and bars.	Kg	R.O.	67.00
91	Repairing steel window by welding including supplying all materials like hinges, legs, handle plates etc. whatever required for repairing with hire welding set different floor including scaffolding necessary for the work (including the cost of serviers connection charge for the welding) .in any floor complete in all respect.	Each	R.O.	220.00
92	MS or W.I. Ornamental grill of approved design joints continuously welded with M.S. W.I Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs.	Kg	R.O.	70.46

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
93	Easing, oiling and adjusting the steel shutters including scraping all members, and fitting so as to make the shutters easily operable (no extra payment will be made for taking out and fixing glass, if necessary). (Each means a pair of shutter in a frame)	Pair	R.O.	42.00
94	Taking out M.S. Grills from wooden frame including cutting lungs from masonry wall and refitting the same and mending good damages after repairs. (Excluding the cost of necessary repair of damages) or doing any other necessary works. 12mm to 15mm thick.	Each	R.O.	99.00
95	Supplying, fitting and fixing boiling water proof ply conforming to IS: 710-1977 bonded with phenol formaldehyde synthetic resin conforming to IS: 848-1974 of approved make and brand fitted and fixed as per design as per approval and direction of Engineer-in- Charge. [excluding the cost of supporting frame work and teak wood batten/Lipping].		R.O.	
	a) 4mm	Sq.M	R.O.	923.00
	b) 6mm	Sq.M	R.O.	1122.00
	c) 9mm	Sq.M	R.O.	1290.00
	d) 12mm	Sq.M	R.O.	1709.00
	e) 16mm	Sq.M	R.O.	2028.00
	f) 19mm	Sq.M	R.O.	2420.00
96	Supplying fitting, fixing decorative lamination conforming to IS:2046 : 1995 as per approved make, brand, finish and thickness with fitting, fixing the same on Particle/MDF / Ply Boards with recommended / approved adhesive with proper clipping the sides for better attachment as per direction of Engineer-in-charge. The rate includes the cost of labour, adhesive and all incidental charges thereof.Glassy/Matt/Suede excluding surface texture or metallic lustre.	Sq.M		
	(i) Thickness of laminate 1.5mm		R.O.	802.00
	(ii) Thickness of laminate 1 mm		R.O.	688.00
97	Galvanised corrugated iron sheet work (excluding the supporting frame work) fitted and fixed with 10 mm dial J or L hook-bolts, limpet and bitumen washers and putty complete with 150 mm. end lap and one corrugation minimum side lap. (Payment to be made on area of finished work) (GCI sheet to be supplied by contractor) In Roof With 0.63 mm thick sheet	Sq.M	R.O.	644.00
98	Asbestos corrugated (Trafford or similar approved quality) sheet (6 mm thick) work (excluding the supporting framework) fitted and fixed with 9.5 mm. dia. J or L hook-bolt and nuts limpet and bitumen washers and putty with 150 mm end lap & one corrugation minimum side lap complete. (Payment should be made on area of finished work) . In Roof	Sq.M	R.O.	471.00
99	Supplying, fitting and fixing glass reinforced polyester translucent fiber glass sheet to match with GCI Corrugation as per IS: 12866-1989 in roof fitted and fixed with 10 m dial "J" or "L" hook, bolts and nuts, limpet and bitumen washers and putty with 150 mm end lap and one corrugation minimum side lap complete. 2.0 mm +/- 0.2 mm thick sheet (3.25 kg/ Sq.m) with		R.O.	
	a) Natural white or tinted blue colour	Sq.M	R.O.	883.00
	b) Coloured other than natural white or tinted blue	Sq.M	R.O.	959.00
100	Supplying, fitting and fixing glass reinforced polyester translucent ridging 450 mm long each way as per IS 2866-1989 fitted and fixed with bolts J hooked screws and bitumen washers complete.1.6 mm +/- 0.2 mm thick sheet, Coloured other than natural white or tinted blue		R.O.	
	a) Natural white or tinted blue colour	Mtr	R.O.	547.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
	b) Coloured other than natural white or tinted blue	Mtr	R.O.	609.00
101	Supplying at site or stackyard or as directed PCC (1:2:4) Fencing Post 215 cm 150 mm X 150 mm section at bottom 100 mm X 100 mm section at top with T-Base 300mm X 150 mm X 100 mm, having 4 nos 6 mm dia vertical M.S reinforcement and 6 mm dia binders @ 200 mm centres finished smooth etc. complete.	Each	R.O.	448.00
102	Fixing post of iron or precast concrete by digging hole in the ground (in all sorts of soil) and embedding the same by packing the hole with cement concrete (1:3:6) (with jhama khoa. For Purulia, Bankura and Darjeeling Hill by Pakur Variety, local black Hard Stone & Bazree respectively) and finishing the top surface to regular shape (as directed) with 15 cm cement plaster (1:6) complete, including the cost of concrete, plaster etc. but excluding the cost of the post: Average dia. Of the hole 200 mm to 300 mm. Depth 450 mm to 500 mm.	Each	R.O.	158.00
103	Supplying, fitting galvanised barbed wire in fencing (holes already made in the body of the post) or fixed by staples tightening and fixing the wires in taut condition with straining bolts including the cost of cutting and of lapping joints in the wire as necessary but excluding the cost of galvanised staples, straining bolt and binding wire as necessary. 3 ply 12 gauge / 4 points	Mtr	R.O.	27.68
104	Labour for repairs to snapped line of Barbed wire by jointing snapped ends with links of new wire as necessary, stretching and refixing the line in taut condition (excluding the cost of new materials)	Mtr.	R.O.	1.45
105	Supplying 1.5 mm thick M.S. sheet fitted and fixed one or both faces of M.S./ W.I. gate etc. with point welding at not more than 150 mm apart complete in all respect as per design including cost of all labour and materials.	Sq.M	R.O.	977.00
106	Reparing collapsible gate by cutting out all rivets as necessary re-assembling all members including welding pieces of channels, straightening bent bars and rivetting with new rivets and fitting in position and painting two coats.	Sq.M	R.O.	379.00
107	Easing and oiling, cleaning collapsible gate and repairing to locking arrangements.	Sq.M	R.O.	17.00
108	Labour for taking out rolling shutter (only shutter portion) dismantling by parts for repair or (replacement of damaged parts only), rehangng and refitting the same in position after necessary repairs (excluding the cost of supply of new parts).	Sq.M	R.O.	283.00
109	Renewing seam pipe for rolling shutter as per existing size and shape fitting, fixing complete.	Mtr.	R.O.	210.00
110	Renewing side split pin for seam pipe for rolling shutter	Each	R.O.	26.00
111	Oiling and greasing of rolling shutter and repair to in side lock.	Sq.M	R.O.	73.00
112	Renewing profile of rolling shutter including fitting & fixing complete as per existing size and shape.	Mtr	R.O.	54.00
113	Renewing spring of rolling shutter as per existing size and shape including fitting and fixing complete.	Each	R.O.	609.00
114	Taking out rain water down pipe.	Mtr	R.O.	8.95
115	Taking out rain water down pipes, removing chokages and prefixing the same in position including mending good damages (of taking out and refixing)	Mtr	R.O.	12.00
116	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 materials (Spun Yarn, Valamoid/Bitumen/M-Seal etc) complete.		R.O.	
	(a) UPVC Pipes 110 mm. Dia.	Mtr.	R.O.	251.00
	(b) Plain Tee	Each	R.O.	172.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
	(c) Bend 87.5 degree	Each	R.O.	160.00
	(d) Shoe	Each	R.O.	111.00
117	Supplying, fitting, fixing C.I Grating (Heavy type). Up to 100 mm Square or 100 mm Dia.	Each	R.O.	69.00
118	Metallic magic eye of approved quality fitted and fixed complete.	Each	R.O.	54.00
119	Supply of labour : Mazdoor (Male)	Each	R.O.	245.00
120	Labour for Chipping of concrete surface before taking up Plastering work..	Sq.M	R.O.	21.00
	Supplying & laying interlocking designer paver block of any shade and of pproved quality as per IS: 1237-1980 laid in pattern as directed in pavement, footpath, driveway, etc including necessary underlay complete in all respect with all labour and material.			
	a) 25 mm thick Block (over 25 mm thick (Avg) Cement mortar (1:3) & Cement Slurry @ 4.4 kg/Sq.m at back side of Block.			
	i) Grey	Sq.M	R.O.	968.00
	ii) Coloured Decorative	Sq.M	R.O.	1005.00
121	(b) 40 mm thick block (over 150 mm medium sand bed including cost of sand but excluding cost of earthwork in excavation or dismantling of existing hard surface if necessary)			
	i) Grey	Sq.M	R.O.	935.00
	ii) Coloured Decorative	Sq.M	R.O.	1049.00
	(c) 60 mm thick block (over 150 mm medium sand bed including cost of sand but excluding cost of earthwork in excavation or dismantling of existing hard surface if necessary)			
	i) Grey	Sq.M	R.O.	1236.00
	ii) Coloured Decorative	Sq.M	R.O.	1387.00
122	Supplying and laying chequered tiles of any shade & of approved quality with (1:1½:3) cement concrete laid in panels or patterns as directed in pavement, footpath etc. including necessary underlay 25 mm thick [avg] cement mortar (1:3) complete in all respect with all labour and materials. [Using cement slurry @ 4.4 kg/Sq.m at back side and @2.4 kg/Sq.m for joint filling], Red Variety, 25 mm. thick	Sq.M	R.O.	455.00
123	Removal of rubbish,earth etc. from the working site and disposal of the 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	R.O.	166.00
	Supplying profiles of required section made of Aluminium Alloy Extrusions conforming to IS: 732-1983 and IS: 1285- 1975; Annodized (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 Annodizing film.		R.O.	
	A. Casement window (40 mm Depth series)			
	i) Outer frame.	Mtr	R.O.	157.00
	ii) Mullion.	Mtr	R.O.	222.00
	iii) Shutter.	Mtr	R.O.	154.00
	iv) Glazing clip.	Mtr	R.O.	42.00
	v) Cleat angle. (Non-annodized)	Mtr	R.O.	263.00
	B. Movable door shutter.			

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Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
124	a) Door frame. (Top & sides).	Mtr	R.O.	315.00
	b) Shutter :			
	i) Top rail.	Mtr	R.O.	304.00
	ii) Bottom rail.	Mtr	R.O.	448.00
	iii) Lock rail	Mtr	R.O.	377.00
	iv) Door vertical.	Mtr	R.O.	332.00
	v) Glazing cleap.	Mtr	R.O.	50.00
	C. Fixed partitions. (Unsupported length of vertical member upto 1.5 mtr. Height of both ends of vertical member restrained but panels within 0.9 sq.m.)			
	i) Top , bottom & side member.	Mtr	R.O.	462.00
	ii) Intermediate member.	Mtr	R.O.	480.00
	iii) Glazing clip.	Mtr	R.O.	46.00
125	Supplying EPDM gasket of approved make and brand as per direction of Engineer in charge. For sliding windows , 'U' shaped EPDM gasket for frames.	Mtr	R.O.	15.00
126	Repairing of glazed aluminium door as per instruction of Engineer -in-Charge	Sq.M	R.O.	250.00
	Labour charge for fabrication and installation of composite door, window, partitions made from anodized extruded alloy aluminium sections for the following units:-			
	A) Glazed aluminium sliding windows made of extruded and anodized alloy aluminium sections, fabrications, including cutting to proper shape and size, drilling and aligning of window shutter frame fitted with in built locking arrangements, sliding rollers and other necessary fittings, fixture, adhesives and joineries along with extruded neoprene or EPDM gasketing in between window frame and masonry work (walls, column, beam.lintels etc.) as well as between glass and shutter frame for fixing glass and Poly Sulphate sealant and in between shutter and window frame where necessary including cutting to requisite size and fixing glass as per drawing, specification and direction of EIC. The rate includes the hire charge of all tools and plants, including all incidental charges, adhesive, joineries such as screw, cleate angle etc. but excluded the cost of extruded aluminium sections, glass, neoprene / EPDM gasketing, locking arrangement and rollers. - Openable / Casement window.	Sq.M	R.O.	1117.00
	(B) Partly glazed partly panelled or fully glazed single leaf aluminium swing door made of extruded and anodized alloy aluminium sections, fabrication including cutting to proper shape and size, drilling and aligning, fitted with heavy duty hydraulic action floor spring placed in the floor with mending damages,with top pin assembly of approve make and brand, fitted with in built locking arrangement, flush bolt, glazing clips and all other necessary fittings, fixtures, adhesives and joineries, cutting glass of approved make to requisite shape and size fitting with dry set neoprene or EPDM gasketing, cutting to requisite shape and size panel board (prelaminated particle block) fixing them with glazing clips as per drawing, specification and direction of Engineer in charge.	Sq.M	R.O.	1128.00
127				

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
	The rate includes the hire charge of all tools and plants, adhesive, joineries such as screw, cleate angle etc. but excluded the cost of extruded aluminium sections, glass,panel boards eoprene / EPDM gasketing, locking arrangement, weather gasketing / wool pile, floor spring, top pin, handle, tower bolt, glazing clips etc. (10% rate reduction has to be made for swing doors or partitions where floor sping is not used. 10% enhancement of rate is to be made where door frame of extruded aluminium sections has to be fitted and fixed to masonry wall. 5% rate enhancement may be allowed for double leaf swing door. Payment shall be made for the shutter area only exept where door frame is fixed the entire opening shall be taken to consideration.Payment for door frame sections are to be paid seperately).			
	(C) Partly glazed and partly panelled partition or fixed glazing made of extruded and anodised alloy aluminium sections, fabrications after cutting to proper shape and size, drilling and aligning fitted with inbuilt locking arrangement cutting the glass / board (prelaminated / particle / block) to requisite shape and size moulding the edges fitted and fixed glazing clips and dry set neoprine /EPDM gasket, along with all other necessary arrangements for fixing the partition to walls, floors, beams, columns polysulphide sealant for water proofing if necessary complete in all respect as per drawing and specifications and direction of the Engineer in charge. The rate includes the hire charge of all tools and plants, adhesive, joineries such as screw, fastener but excludes the cost of extruded aluminium sections, EPDM gasket, glass, board, glazing clips, locking arrangement, etc. For partitions using section of size:			
	a) 63.50 mm x 38.10 mm	Sqm	R.O.	763.00
	b) 101.50mm x 44.45 mm	Sqm	R.O.	899.00
	Providing and fixing Polyester powder coated (minimum thickness of polyester powder coating 50 micron) aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per specifications, architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately).			
	a) For fixed portion / Door frame	Kg	R.O.	391.80
	b) For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).	Kg	R.O.	452.40
128	Providing and fixing pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness, including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strikeplate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineerin-charge:Profile B,Fixing with adjustable lugs with split end tail to each jamb in any floor complete in all respect.	Mtr.	R.O.	340.35

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
129	Supplying fitting and fixing door and window frame with M.S. angle as per drawing & direction of required section. The holes for counter sunk machine screw & nuts will be such as to fit 8 to 10 mm Iron screw. The counter sunk nut to be welded. The nuts are to be welded after careful checking with screw. All welding spots should be properly filed or rounded smooth including cost of welding hinges for hinge cleats, lugs for hasp bolt, socket bolt etc. and necessary M.S. clamps of 25mm x 6mm flat 225mm long as per direction welded to the frame fitted and fixed in position excluding cost of concrete in any floor complete in all respect.	Kg.	R.O.	79.00
130	(a) Supplying fitting and fixing or renewing (taking out the old and refixing the new) M.S. round or square bar grating after dismantling the parts and refixing of new or existing windows etc. in holes of window frame and with intermediate flat bar stiffener (with necessary holes for the grating bars and with the ends turned and fixed to timber frame with necessary screws) complete, as directed in any floor complete in all respect.	Kg.	R.O.	61.23
	(b) Supplying fitting and fixing or renewing (taking out the old and refixing the new) M.S. works in framed gratings after dismantling the parts and refixing of new or existing window etc. made of round or square bars and frame work or M.S. flats (with the bars securely fixed to the flat bar frame) with or without intermediate flat bar stiffener and fixed with necessary screws, welding, cutting etc. as directed in any floor complete in all respect.	kg	R.O.	62.99
	(c) Supplying fitting and fixing only Ordinary grating bars after dismantling the parts and refixing of new or existing window etc. made of round or square M.S. rods in holes of window frames etc. as directed in any floor complete in all respect.	Kg.	R.O.	59.47
131	M.S. structural works in columns, beams etc. with simple rolled structural members (e.g. joists, angle, channel sections conforming to IS: 226, IS: 808 & SP (6)- 1964 connected to one another with bracket, gussets, cleats as per design, direction of Engineer-in-charge complete including cutting to requisite shape and length, fabrication with necessary bolting, metal arc welding conforming to IS: 816- 1956 & IS: 1995 using electrodes of approved make and brand conforming to IS: 814- 1957, haulage, hoisting and erection all complete. The rate includes the cost of rolled steel section, consumables such as electrodes, gas and hire charge of all tools and plants and labour required for the work including all incidental charges such as electricity charges, labour insurance charges etc. Payment to be made on the basis of calculated weight of structural members only in finished work as per IS specified weight. Payment for gusset, bracket, cleat, rivets, bolts and nuts may be made by adding the actual weight of such items with the weight of finished structural members or 7% of weight for finished structural members weighing not less than 22.5 Kg. / m. or 15 % of weight for finished structural members weighing less than 22.5 Kg. / m. may be increased allow for bracket, cleat, rivet, bolts and nuts etc. and no separate payment being made for these items, as per direction of Engineer In Charge in any floor complete in all respect.			
	(a) For structural members of specified sections weighing less than 22.5 Kg./m	Kg.	R.O.	59.12
	(b) For Structural Works in Roof Trusses etc. using joists, channels and angles of specified section weighing less than 22.5 kg/ m	Kg.	R.O.	60.28
	(c) For built up sections / structural members of specified sections weighing not less than 22.5 Kg./m	Kg.	R.O.	61.78
132	Welding in M.S. structural work with gas or electric where necessary as per direction of engineer in charge in any floor complete in all respect.			
	(a) Tack weld.	Point	R.O.	9.00
	(b) Continuous weld.	cm run	R.O.	9.00
133	M.S. works in brackets made from flats, angles, tees etc. to sizes specially bent, twisted, forged; making holes drilled and fitted to rafter of trusses with necessary bolts, nuts, washer or screws etc. where necessary as per direction of engineer in charge in any floor complete in all respect.	Kg.	R.O.	73.35

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
134	Dismantling doors, windows and clerestory windows (steel or wood) shutter including frames, architrave, holdfasts etc. complete and stacking within 50 metres lead :of area 3 sq. metres and below, in any floor complete in all respect.	Each	R.O.	157.85
135	Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead, in any floor complete in all respect.	Sq.M	R.O.	24.30
136	Dismantling wood work in frames, trusses, purlins and rafters up to 10 metres span and 5 metres height including stacking the material within 50 metres lead, for sectional area below 40 square centimetres, in any floor complete in all respect.	Mtr.	R.O.	7.70
137	Wood work in frame other than door and window, posts, post plates, rafters, battens, truss members, purlins etc. fitted and fixed (excluding the cost of bolts, paints, but including the cost of nails, screws etc.) in any floor complete in all respect.	Cu.M.	R.O.	73019.00
138	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead. For thickness of tiles 10 mm to 25 mm	Sqm	R.O.	32.550
139	Supply and application of shrinkage compensating Polymer of approved make to bridge Cracks on brick wall or plaster upto 10mm width including preparing the surface. Preferred material : CRACK-X SHRINKFREE of Dr. Fixit or equivalent priorly approved	Lit.	R.O.	657.00
140	(a) Stitching crack in brick wall by carefully cutting out face brick 125 mm. deep into the wall, cleaning the gap and filling up the same with precast cement concrete block carefully set in cement mortar (1:3) including mending good damages and finishing the surface to match with adjacent areas complete as per direction with reinforced cement concrete blocks (1:1½:3) with stone chips and nominal reinforcement Block size 250 x 125 x 75 mm.(Cement-1.85 Kg/No.) in any floor complete in all respect.	Each	R.O.	105.00
	(b) Stitching crack in brick wall by carefully cutting out face brick 250 mm. long, 75 mm. thick and 125 mm deep into the wall, cleaning the gap and filling up the same with sound new brick, carefully set in cement mortar (1:3) including mending good damages and finishing the surface to match with adjacent areas complete as per direction.(Cement-1 Kg/No.) in any floor complete in all respect.	Each	R.O.	40.00
	(c) Repairing crack in wall by cement grouting (1 : 2) including widening the crack on the surface (into V section) cleaning and packing the same with cement mortar (1 : 2) and finishing off to match with adjacent surface.(Cement-69 Kg/100 m) in any floor complete in all respect.	Mtr.	R.O.	13.01
141	Supplying fitting and fixing of Hexagonal Chicken Mesh of approved quality in floor, wall, dado, plinth protection etc. as a reinforcement, with necessary nails etc. at all levels & in any floor complete in all respect as per instrcution of Engineer in charge.	Sq.M	R.O.	30.00
142	Supplying dividing strip fitted and fixed with cement mortar (1:3) in mosaic or patent stone floor, dado etc. complete as per direction of the Engineer-in-charge.Glass - 3mm. Thick 20 mm. wide strip in any floor complete in all respect.	Mtr.	R.O.	17.00
143	Renewing 125mm long wooden buffer block of door and windows with Sal : Siliguri or equivalent PVC buffer block (standard size)approved quality as per direction of engineer in charge. in any floor complete in all respect.	Each	R.O.	57.00
144	Supplying , fitting and fixing hinge cleat in position excluding the cost hinge and other fiffitngs. in any floor complete in all respect.			
	a) with 50mm iron Butt-hinge,Local Sal.	Each	R.O.	29.00
	b) with 75mm iron Butt-hinge,Local Sal.	Each	R.O.	35.00
	(a) Anti-termite treatment to the outside of foundation with chemical emulsion by admixing chloropyrofos emulsifiable concentrate (1% concentration) with water by weight, drilling 12mm.dia holes in concrete or masonry apron at an interval of 300mm. to a depth, of 300mm or more as close to the plinth wall as possible and the chemical emulsion pumped into those holes to soak the soil below at a rate of 2.25 litres per linear metre complete as per specification laid down in para 4.3.1.1 of Code I.S.- 6313 (Part-III)-1981.	Mtr.	R.O.	83.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
145	(b) Anti-termite treatment to the soil under floor with chemical emulsion by admixing chloropyrofos emulsifiable concentrate (1% concentration) with water by weight including drilling vertically 12mm. dia holes at the junction of floor and wall at 300mm. interval to reach the soil below using hand operated pressure pump to squirt chemical emulsion into the pump to squirt chemical emulsion into the holes at the rate of one litre per hole. The holes shall be sealed after operation to match with the existing floor. The entire work is to be carried out as per specification laid down in para 4.3.1.4 of code I.S.- 6313 (Part-III)-1981.	Sq.M.	R.O.	93.00
	(c) Anti-termite treatment to the junction of wood work and masonry walls with chemical emulsion by admixing chloropyrofos emulsifiable concentrates (1% concentration) with water by weight including spraying at the points of contact with the adjoining masonry by drilling 6m. dia holes at a downward angle of about 45 degree at the junction of woodwork and masonry and squirting chemical emulsion into these holes at the rate of half litre per hole. The entire work is to be carried out as per specification of Code I.S.-6313 (Part-III)-1981. The shutters are to be sprayed with emulsion. on both sides. All wooden fixtures like almirahs, racks etc. are also to be throughly sprayed with chemical emulsion in any floor complete in all respect.	Sq.M.	R.O.	61.00
	(d) Pre-Constructional Measures : Anti termite treatment to the top surface of the consolidated earth within plinth walls with chemical emulsion by admixing chloropyrofos emulsifiable concentrates (1% concentration) with water by weight at the rate of 5 Litres per sq. m. of the surface before sand bed or sub-grade is laid. Holes upto 50 mm. to 75 mm. deep at 150 mm. centre to centre both ways shall be made with 12 mm,diameter mild steel rod on the surface to facilitate saturation of the soil with the chemical emulsion. The work shall be carried out as per specification described in para 6.4 of code IS-6313 (part -II)1981. (Mode of measurment will be per Sq.m of plan area of plinth treated.) in any floor complete in all respect.	Sq.M.	R.O.	110.00
146	Supplying, fitting, fixing G.I chain link fencing 75 mm x 75 mm mesh 12g wire to the R.C.C or wooden posts with galvanised hooks or staples etc. including additional top strengthening G.I.wire complete in all respect at all necessary places as per direction.	Sq.M.	R.O.	169.00
147	Providing and fixing magnetic catcher of approved quality in cupboard /ward robe shutters, including fixing with necessary screws etc. complete. in any floor complete in all respect.			
	(a)Triple strip vertical type	Each	R.O.	28.45
	(b)Double strip (horizontal type)	Each	R.O.	21.50
148	Supplying, fitting, fixing or renewing (taking out the old and refixing the new) Nickled Chromium Brass cupboard lock. in any floor complete in all respect.			
	(a) 40 mm size	Each	R.O.	56.00
	(b) 50 mm size	Each	R.O.	66.00
149	(a) Providing and fixing or renewing (taking out the old and refixing the new) oxidised M.S. hasp and staple (safety type) conforming to IS : 363 with necessary screws etc. complete : 90 mm size	Each	R.O.	16.80
	(b) Supplying, fitting, fixing or renewing (taking out the old and refixing the new) Iron pad bolt (lock) of approved quality rod and handle 115mm x 10mm dia rod 65mm x 3mm plate. in any floor complete in all respect.	Each	R.O.	89.00
	(c) Supplying, fitting, fixing or renewing (taking out the old and refixing the new) Iron door ring of approved quality with nut and washer complete 50mm dia. in any floor complete in all respect.	Each	R.O.	17.00
	(d) Supplying, fitting & fixing Stainless Steel Hook including steel screws in all complete.	Each	R.O.	5.00
	(e) Supplying, fitting & fixing Stainless Steel Wall Hanger of 350 mm Long With 08 Nos Hooks including steel screws in all complete.	Each	R.O.	400.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
150	Supplying, fitting and fixing Marble Slab/tile of 15 to 18 mm thickness in floor, lobby, stair, landing & treads etc. over 20 mm (av.) thck base of Cement mortar (1:2) laid with white cement slurry @ 4.4 kg/Sq.m before placing marble & jointed with white cement slurry @ 2.0 kg/Sq.m with necessary pigments including grinding and Granite polishing as per direction of Engineering -in -Charge in any floor complete in all respect.			
	(a)With Makrana plain pink / Adranga Pink / Garbh Gulabi / Udaypur pink / Udaypur Green / Black Bhaslana			
	(i)Area of each Slab/tile upto 0.3 sq.m.	Sq.M.	R.O.	1446.00
	(ii)Area of each Slab/tile exceeding 0.3 sq.m. but not exceeding 0.6 sq.m.	Sq.M.	R.O.	1673.00
	(b)With Chawk Dungri			
	(i)Area of each tile upto 0.3 sq.m.	Sq.M.	R.O.	1616.00
	(ii)Area of each tile exceeding 0.3sq.m. but not exceeding 0.6 sq.m.	Sq.M.	R.O.	1845.00
151	(a)Washing and cleaning with soap water and rubbing with oil cloth in all types of floor and dado in any floor complete in all respect.	Sq.M.	R.O.	6.00
	(b)Ready mix Wax polishing to wood work including preparing surface.On old wax polished surface including removal of old polish in any floor complete in all respect.	Sq.M.	R.O.	115.00
	(c)Grinding to existiting marble / mosaic floor including remaining stone,if necessary, after cutting with manual labour / machine,where necessary in any floor complete in all respect.	Sq. M	R.O.	20.00
152	staging in any floor using approved MS stout props and thick hard wood planks of approved thickness for platform with required bracing including fitting, fixing and striking out after completion of works (Mode of measurement : area in plan x mean height of staging) complete in all respect.	Cu.M.	R.O.	58.00
153	Red oxide wash of approved shade including cleaning and smoothening surface thoroughly.One coat in any floor complete in all respect.	Sq.M	R.O.	24.25
154	Painting with ready mixed Black Japan of approved make and brand including smoothening surface One coat in any floor complete in all respect.			
	(a)One coat	Sq.M	R.O.	32.00
	(b)Two coats	Sq.M	R.O.	56.00
155	Painting block letters or digits in Black Japan or any approved paint as per direction in any floor complete in all respect.			
	(a) Size above 5 cm. and upto 7.5 cm.	Each	R.O.	11.00
	(b)Size above 7.5 cm. and upto 10 cm.	Each	R.O.	12.00
156	M.S. structural works in roof trusses with tubular sections conforming to IS: 806-1957 & IS: 1161- 1958 cnnected to one another with bracket, gusset cleats as per design, direction of Engineer-in-charge complete including cutting to requisite size, fabrication with necessary metal arc welding conforming to IS: 816- 1956 & IS: 9595 using electrodes of approved make and brand conforming to IS:814- 1957, haulage, hoisting and erection all complete. The rate includes the cost of rolled steel section, consumables such as electrodes, gas and hire charge of all tools and plants and labour reqired for the work including all incidental chages such as electricity charges, labour insurance charges etc. Payment to be made on the basis of calculated weight of structural tubular memebtrs as specified in relevent IS code in finished work. Payment for gusset, bracket, cleat may be made by adding the actual weight of such items with weight of finished structural members. The rates are considered for a height of erection 8 m. / 2nd floor level from the ground. Add 1.5 % extra over the rate for each additional floor or 4m. beyond the initial 8 m. or part thereof.			
	(a) For trusses spanning up to 12.00 m	Kg	R.O.	59.468
	(b) For trusses spanning above 12.00 m and up to 20 .00 m	Kg	R.O.	61.675
	(c) For trusses spanning above 20.00 m and up to 30 .00m	Kg	R.O.	63.115

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
157	a) Supplying fitting & fixing concealed of False ceiling Framework with G.I. Section (perimeter channels having one flange of 20 mm. and another flange of 30 mm. with thickness of 0.55 mm. and web of length 27 mm., along the perimeter of the ceiling, screws fixed to the wall with help of nylon sleeves or PVC dash fasteners @ 610 mm c/c. then suspend G.I. intermediate 'C' section with web 90 mm. and flanges of 15 mm. each from soffit @ 1200 mm c/c with ceiling angle of size 25 mm. X 10 mm. X 0.55 mm. fixed to soffit G.I. Cleat and Steel expansion fasteners. Ceiling section of 0.55 mm. thickness having web of 51.5 mm. and two flanges of 26 mm. each with lips of 10.55 mm., are then fixed on to the intermediate channel with the help of connecting clips in the direction perpendicular to the intermediate channel @ 610 mm c/c) with fully threaded fiber cement screws @ 300 mm c/c. All complete as per the drawing and direction of Engineer-in-Charge. Section specification :- Perimeter Channel :- 30 mm X 20 mm X 27 mm, thickness 0.55 mm (min), Intermediate Channel :- 15 mm X 90 mm, thickness 0.90 mm (min), Ceiling Section :- 51.5 mm X 26 mm X 10.55 mm, thickness 0.55 mm (min), Ceiling Angle :- 25 mm X 10 mm, thickness 0.55 mm (min).	Sq.M	R.O.	351.00
	b) Supplying ,fitting & fixing Eco-friendly, Water Resistance and Incombustable Calcium Silicate board/tiles (Density >900 Kg per Cu.m.) of approved design and brand finished with calcium silicate jointing compound to form a joint less false ceiling all complete as per drawing & direction of Engineer - in- Charge for false ceiling with 8mm thick square edged Calcium Silicate Board.	Sq.M	R.O.	457.00
158	G.I. Rain water spout 75 mm. Dia. And 600 to 750 mm. Long supplied fitted and fixed complete with two coats of paint to both exposed portion.	Each	R.O.	142.00
159	Cement washing including cleaning and smoothening surface thoroughly (cement to be used @15 kg./100 sq.m. of surface for one coat and @25 kg./100 sq.m of surface for two coats): External surface.			
	(a) One coat	Sq.M	R.O.	9.15
	(b) Two coats (on new works only).	Sq.M	R.O.	14.24
160	Providing and fixing 15 mm dia specially threaded nozzles in a grid pattern at a spacing not exceeding 1 mtr. Centre to centre on the entire raft and walls and also along the construction joints and at regular intervals not exceeding 1 mtr. Injecting non shrink grouting compound mixed with neat cement slurry through nozzle under pressure by pumps and sealing off the nozzles after the completion of the injection operation is complete and as per the direction of EIC.	Sq.M	R.O.	300.00
161	Providing and laying water proofing treatment to the surface by applying cement slurry mixed with water proofing cement compound consisting of applying : a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around.	Sq.M	R.O.	285.00
162	Forming/Renewing (100 to 150mm radius) of gridcone/ rounding made at roof & wall junction using cement sand & stone aggregate in (1:2:4) and admixing with integral water proofing compound CONPLAST X 421,IC. (the rates including all of cost of chemical).	Sq.M	R.O.	150.00
163	Single Brick Flat Soling of picked jhama bricks including ramming and dressing bed to proper level and filling joints with local sand.	Sq.M	R.O.	343.00
164	Expansion joint in floor roof etc. formed with V strips made of 22.5 cm wide strips of 24 gauge aluminium sheets with anchor arm projecting on each side (and end turned) embedded in adjacent cement concrete, including shaping and finishing the edges on either side of the joint (including the cost of polysulphide / bituminous filler) complete as per direction.	Mtr.	R.O.	325.00
165	Godrej Hydraulic door closer fitted and fixed complete.Medium type	Each	R.O.	165.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
166	Supplying, fitting and fixing Half round channel with or without outlet as required set in cement concrete (6:3:1) with jhama chips complete.600 mm X 150 mm, White vitreous chinaware	Mtr.	R.O.	579.00
	(i) Channel with outlet, stop end		R.O.	616.00
	(ii) Channel with 'L' or 'T'		R.O.	771.00
167	Supplying, fitting and fixing 18 mm thick marble partition slab with chawk doongri marbel square cut, both sides polished with two front corners rounded and edges polished.	Sq.M	R.O.	1426.00
170	Supplying, fitting, Fixing Fly / Mosquito proof nylon net on any type of window, door shutter frame with necessary fixing arrangements complete.	Sq.M	R.O.	834.00
171	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 desired shade including filling / grouting and finishing complete as per direction of Engineer-in-charge. Note: 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: MYK Laticrete, Fosrock or equivalent approved			
	i) Size of tile - 300mm x 300mm (depth of cutting 8mm)	Sq.M	R.O.	431.000
	ii) Size of tile - 400mm x 400mm (depth of cutting 8mm)	Sq.M	R.O.	381.000
	iii) Size of tile - 600mm x 600mm (depth of cutting 8mm)	Sq.M	R.O.	331.000
	iv) Size of Kota Stone - 600mm x 600mm (depth of cutting 20mm)	Sq.M	R.O.	484.000
	v) Size of tile - 100mm x 200mm (depth of cutting 6mm)	Sq.M	R.O.	561.000
	vi) Size of tile - 200mm x 200mm (depth of cutting 6mm)	Sq.M	R.O.	454.000
	vii) Size of tile - 200mm x 300mm (depth of cutting 6mm)	Sq.M	R.O.	417.000
	viii) Ceramic Drain Channel (depth of cutting 8mm)	R.M.	R.O.	69.000
172	Cleaning the concrete surface by removing dirt and debris, marking defective locations and removing loose concrete by careful stripping until hard surface is exposed, cutting the concrete to regular shape, wire brushing the exposed surface and removing debris from site complete as per direction of the Engineer -in - charge.	Sq.M	R.O.	90.00
173	Cleaning the exposed reinforcement preferably unto full diameter by wire brush, applying two coats of polymer based rust removing compound left for 24 hours removing the coating and then applying two (2) coats of polymer modified anti corrosive protective coating formulated to inhabit the corrosion of reinforcement as per manufacturer's specification.	Sq.M	R.O.	785.00
174	Applying epoxy based reactive joining agent for joining the old concrete with fresh concrete to be applied within manufacturer's specified time as per manufacturers specification (0.4 kg / m ² of concrete surface)	Sq.M	R.O.	309.00
175	Supplying and mixing an integral waterproofing compound admixture @ 100 gms per bag of cement (Product : Plastocrete Plus of SIKA or Equivalent)	Kg	R.O.	100.00
176	Providing coving at the corners of Floor and wall junction with polymer modified mortar:	R.M.	R.O.	180.00
	i) Making groove of 20mm x 20mm along the joints of concrete floor and vertical brick wall and cleaning the surface properly. ii) Supply and application of a bond coat of Latex polymer and filling the groove with 1:3 cement sand mortar, mixed with acrylic polymer modified high quality emulsion. Approved product : Sika Top 77 or equivalent			

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
177	<p>Supply and application of waterproof coating on the prepared surface in a continuous film on the floor of the wet area with one component, flexible, micro fibre reinforced, cementitious product modified with special alkali-resistant polymers which can produce a flexible membrane for waterproofing.</p> <p>Two coats should be applied over the horizontal floor surfaces and vertical surfaces of wall over the coving up to 300mm above the final finished floor level (before tiling). The coating shall also be continued on to the inner surfaces of the pipe penetration holes.</p> <p>The first coat of treatment shall be applied over a primer coat. After application of the first coat a fibre cloth mesh to be laid when the coat becomes tacky. Minimum 100 mm lapping to be maintained on the edges of fibre cloth mesh. After curing of the first coat, top coat to be applied on the right angle of first coat and to be allowed to dry for six hours before starting other activities of floor finish. 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.</p> <p>System - Sika Flexicoat 1K or equivalent approved Primer - Sika Flexicoat primer Base coat - Sika Flexicoat 1K base coat Fibre cloth mesh - Sika Fab1 Top Coat - Sika Flexicoat 1K top coat Consumption:1.5Kg per Sqm for 2 coats</p>	Sq.M	R.O.	290.00
178	<p>Filling the annuals of pipe joints by rich concrete of M-20 grade with non shrink admixture; followed by providing a moisture insensitive epoxy putty in a continuous, 10mm thick gasket around the pipes to a width of approximately 10 mm.</p> <p>Epoxy putty : Sikagard 694F(I) or equivalent</p>	Point	R.O.	250.00
179	<p>Supplying, fitting & fixing aluminium stair nosing 28.92 mm x 31.92 mm x 1.27 mm thick of aluminium extruded sections of 0.172kg/metre length as per IS: 733 including GSM screws and other incidental cost complete as per requirement and direction of Engineer-in-charge. All sections shall be natural/ golden colour anodized in AC 15 microns as per IS 5523 : 1983.</p>	Mtr	R.O.	270.00
180	<p>Supplying, fitting and fixing boiling water proof block board conforming to IS:1659-1990 conforming to IS:848-1974 of approved make and brand, fitted and fixed as per design as per direction of Engineer-in-charge. [Excluding the cost of supporting frame work and teak wood batten/Lipping]. 19mm</p>	Sq.M	R.O.	1827.00
181	<p>Supplying fitting and fixing in position 8 mm. to 12 mm. thick Dholpur slab in wall, dado making suitable arrangement to hold the stone properly with approved polymerised adhesives (6 mm thick) as per ISI specification including pointing with cement mortar (1:2) (1 cement: 2 marble dust) with admixture of pigment matching the stone shades all complete as per direction of Engineer-in-charge including cost of all materials, labour, scaffolding, staging, curing complete [using white cement for pointing @ 2.4 kg/ Sq.m].</p>	Sq.M	R.O.	1161.00
182	<p>Providing and applying Polymer concrete made with water resistant bonding agent of synthetic rubber emulsion as per manufacturer's specification excluding the cost of cement concrete (2.75 Kg / bag of cement)Note : Payment on volume of (1 : 1½ : 3) Concrete.</p>	Cu.M	R.O.	4403.00
183	<p>Precast pierced concrete jally work as per design and manufacturer's specification including moulding etc. with stone chips and necessary reinforcement shuttering complete including fitting, fixing in position in all floors. 50 mm. thick panels</p>	Sq.M	R.O.	359.00
185	<p>M.S. gate of Jail type as per approved design made of strong M.S. frame work, intermediate stiffeners and round / square bars or angles. M.S. sheet (not less than 14 gauge) gussets, cleats etc. including necessary riveting, bolting, welding, locking and hanging arrangements, fitting and fixing complete as per direction of the Engineer-in-charge.</p>	Kg.	R.O.	75.66

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
Part : B (Sanitary and Plumbing Works)				
SI No.	Description of Item	Unit	Quantity	Rate (Rs.)
1	Dismantling H.C.I. pipe with fittings including melting lead caulked joints.100 mm dia	Mtr.	R.O.	64.00
2	Refixing H.C.I. pipe with fittings including lead caulked joints(with the old molten lead).100 mm dia	Mtr.	R.O.	71.00
3	Melting out lead caulked joint 100 mm	Mtr.	R.O.	26.00
4	Renewing lead caulked joints for H.C.I. pipe with new gaskets.100 mm	Each	R.O.	261.00
5	Renewing door of H.C.I. bend or junction with new bolts and nuts including taking out.	Each	R.O.	84.00
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	R.O.	751.00
7	Supplying, fitting & fixing Cast iron single branch equal Tee conforming to I.S. 1729/1970 including jointing 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	R.O.	905.00
b	100 mm dia. without door	Each	R.O.	855.00
8	Supplying, fitting & fixing Cast iron double branch equal conforming to I.S. 1729/1970 including jointing and painting two coats to the exposed surface with approved paint complete. (Payment of Painting will be paid seperately).			
a	100 mm dia. with door	Each	R.O.	1069.00
b	100 mm dia. without door	Each	R.O.	1019.00
9	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	R.O.	646.00
10	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 joints100 mm dia.	Each	R.O.	600.00
11	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	R.O.	367.00
12	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)	Each		
1	P' Trap 100 mm dia.	Each	R.O.	948.00
2	S' Trap 100 mm dia.	Each	R.O.	803.00
13	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	R.O.	710.00
14	Supplying, fitting and fixing C.I. round grating.100 mm	Each	R.O.	62.00
15	Taking out rain water down pipes, removing chokages and refixing the same in position including mending good damages (of taking out and refixing)	Mtr.	R.O.	12.00
16	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	R.O.	16.00
18	Cutting hole through wall, roof or cornice and mending good all damages.	Each	R.O.	68.00
19	Supplying, fitting and fixing Orissa pattern water closet in white glazed vitreous chinaware of approved make in position complete excluding 'P' or 'S' trap (excluding cost of concrete for fixing).580 mm X 440 mm	Each	R.O.	1613.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
20	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	R.O.	1421.00
21	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.			
a	With 'P' trap (with vent)	Each	R.O.	3104.00
22	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	R.O.	371.00
	E.W.C	Each	R.O.	302.00
23	Supplying,fitting and fixing 32 mm dia. Flush Pipe of approved make with necessary fixing materials and clamps complete. Polythene Flush Pipe	Each	R.O.	155.00
24	Dismantling E.P. or Anglo-Indian W.C.	Each	R.O.	45.00
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)			
	(a) For Exposed Work PVC Pipes			
a	15mm dia light quality	Mtr	R.O.	177.00
b	20nn dia light quality	Mtr	R.O.	201.00
c	25mm dia light quality	Mtr	R.O.	267.00
d	40mm dia light quality	Mtr	R.O.	352.00
e	50mm dia light quality	Mtr	R.O.	458.00
26	Supplying, fitting and fixing PVC pipes of approved makeof (medium duty) conforming to ASTM D - 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)			
	(a) For Exposed Work PVC Pipes			
a	15mm dia	Mtr	R.O.	101.00
b	20nn dia	Mtr	R.O.	129.00
c	25mm dia	Mtr	R.O.	177.00
d	40mm dia	Mtr	R.O.	292.00
e	50mm dia	Mtr	R.O.	384.00
27	Providing fitting fixing prayag or equivalent make bib cock.	Each	R.O.	154.00
28	Providing fitting fixing prayag or equivalent make stop cock.	Each	R.O.	154.00
29	Providing fitting fixing prayag or equivalent make pillar cock.	Each	R.O.	222.00
30	Providing fitting fixing prayag or equivalent make swivel shower. 75 mm round	Each	R.O.	179.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
31	Providing fitting fixing prayag make angular stop cock.	Each	R.O.	182.00
32	Providing fitting fixing GI hook	Kg.	R.O.	80.00
33	labour charges for dismantling&refixing bib cock,stop cock shower, pillar cock, fixing old/new taps	Each	R.O.	13.00
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	R.O.	72.00
35	Supplying, fitting and fixing gunmetal wheel valve of approved brand and make tested to 21 kg per sq. cm. (for water lines only).		R.O.	
a	25 mm dia	Each	R.O.	778.00
b	50 mm dia	Each	R.O.	2277.00
36	Dismantling cistern including disconnecting all pipes, accessories and fittings.Up to 10 litre	Each	R.O.	28.60
37	Refixing cistern including refixing all pipes, accessories and fittings.Up to 10 litre	Each	R.O.	28.60
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			
a	450 mm long	Each	R.O.	96.00
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	R.O.	1300.00
40	Dismantling basin, sink with waste fittings and brackets	Each	R.O.	35.00
41	Refixing wash basin with brackets with or without waste pipes	Each	R.O.	71.00
42	Supplying, fitting and fixing white vitreous china best quality approved make wash basin with C.I. brackets on 75 mm X 75 mm wooden blocks, C.P. waste fittings of 32 mm dia., one approved quality brass C.P. pillar cock of 15 mm dia., C.P. chain with rubber plug of 30 mm dia., approved quality P.V.C. waste pipe with C.P. nut 32 mm dia., 900 mm long approved quality P.V.C. connection pipe with heavy brass C.P. nut including mending good all damages and painting the brackets with two coats of approved paint.	Each	R.O.	2208.00
43	Dismantling G.I or P.V.C . pipe with fittings carefully including removing to any distance and stacking.			
	15mm dia upto 25mm	Mtr	R.O.	6.00
	40mm dia upto 50mm	Mtr	R.O.	8.00
44	Refixing G.I. or P.V.C pipe with fittings after cleaning where necessary			
	15mm dia	Mtr	R.O.	6.00
	20mm dia upto25mm	Mtr	R.O.	7.00
	40mm dia upto50 mm dia	Mtr	R.O.	9.00
45	Dismantling Orissa pattern W.C. including taking out of base concrete, if necessary, complete.	Each	R.O.	45.00
46	Providing & fixing of 600 x 450mm mirror of superior glass (of approved) complete with 6mm thick hard board ground fixed to wooden cleats with CP brass screws & washers complete.	Each	R.O.	484.00
47	Refixing Orissa pattern W.C. Including cost of base concrete, if necessary, complete.Payment of concrete to be paid seprately.	Each	R.O.	89.00
48	Refixing E.P. or Anglo-Indian W.C.	Each	R.O.	89.00
49	Supplying, fitting and fixing liquid soap container. PTMT (Prayag or equivalent) .	Each	R.O.	210.00
50	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality colour and make (Prayag or equivalent) . 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective hight of 88 mm, weighin not less than 170 gms .	Each	R.O.	233.45
51	Supplying, fitting and fixing soap holder.PTMT (Prayag or equivalent)	Each	R.O.	135.00

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
52	Supplying, fitting and fixing PTMT Smart Shelf of approved make of size. 300 mm.(Prayag or equivalent)	Each	R.O.	223.00
53	Supplying, fitting and fixing towel rail with two brackets.C.P. over brass.25 mm dia. and 600 mm long	Each	R.O.	430.00
Part : C (Roads Works)				
Sl. No.	Description of Item	Unit	Quantity	Rate (Rs.)
1	Box cutting or filling in Road embankment in all sorts of soil including spreading the spoils properly over the flank as necessary or on berm to approximate grade & camber and rolling the sub-grade with power roller to proper camber and grade as per direction and satisfaction of Engineer-In-Charge including uprooting and removing plants and jungles when and where necessary.			
	(a) Depth up to 150 mm.	Sq.M	R.O	14.40
	(b) Depth above 150 mm and up to 300 mm.	Sq.M	R.O	19.00
2	Rolling subgrade by power roller in all sorts of soil to proper camber and grade including watering as per direction and satisfaction of Engineer-In-Charge.	Sq.M.	R.O	1.80
3	Construction of granular sub-base by providing graded material, mixing by mix in place method with Rotavator at OMC, spreading in uniform layers with Motor grader on prepared surface in proper grade and camber, compacting with vibratory roller to achieve the desired density, including lighting, guarding, barricading, including cost of all materials, machinery, tools and plants including cost of quality control complete as per Clause 401 of Specifications for Road & Bridge Works of MoRT&H (5th Revision) - Grading-II - By Mix in Place Method	Cu.M	R.O	2244.00
4	Water Bound Macadam Base Course: Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screening / binding materials to fill up the interstices of coarse aggregate, watering including lighting, guarding, barricading and making necessary earthen bundh of one metre width on each side and preparing the bed by necessary cutting or filling, including cost of all materials and hire and labour charges of all men and machinery and compacting to the required density, as per Clause 404 of Specifications for Road & Bridge Works of MoRT&H (5th Revision) - using Grading-II Aggregate (53 mm to 22.4 mm) & Stone Screening Type B (11.2 mm) with manual means:	Sq.M	R.O	354.00
5	Providing and applying primer coat with Cationic Bitumen Emulsion of approved grade conforming to IS: 8887-1978 and requisite quantity on prepared surface of granular base including cleaning of road surface and spraying primer using Mechanical means including cost and carriage of bitumen emulsion and all other incidental costs of work complete as per Clause 502 of Specifications for Road & Bridge Works of MoRT&H (5th Revision). For WBM / WMM Surface: (with primer @ 0.70-1.0 kg/sqm)	Sq.M	R.O	27.85
6	Providing and laying bituminous macadam with Mobile Hot Mix Plant (Light Duty) using approved crushed aggregates of specified grading as per Table 500.4 premixed with bituminous binder, transported to site laid over a previously prepared surface at specified laying temperature by means of approved and suitable arrangements to the required grade, level and alignment and rolled with suitable power roller for break down, inter-mediate and finished rolling as per specification to achieve the desired compaction including cost and carriage of stone materials and bitumen, hire charges of machinery and equipment, cost of fuel and lubricants and wages of operational staff, quality control complete as per Specifications for Road & Bridge Works of MoRT&H (5th Rev). For Grading II (19 mm nominal size, 50-75 mm thick).			
	(a) In Profile Corrective Course.	Cu.M	R.O	7210.30
	(b) In Base / Binder Course of 50 mm compacted thickness.	Sq.m	R.O	360.50

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
7	Providing, laying and rolling of Open - graded premix surfacing of 20 mm thickness composed of 13.2 mm (@ 0.018 m ³ per m ²) and 11.2 mm (@ 0.009 m ³ per m ²) size stone aggregates, including thoroughly cleaning of the surface, screening, cleaning and pre-heating stone chips and fully pre-coating the same either using viscosity grade paving bitumen or cut-back or emulsion, carrying the mixture by any suitable arrangements, laying the mixture uniformly over the surface, including line, grade and level to serve as wearing course on a previously prepared base, including mixing in Mobile Hot Mix Plant (Light Duty) and thoroughly rolling with a smooth wheeled roller 8-10 tonne capacity, finished to required level and grades including the cost and carriage of stone chips and matrix, heating the matrix, preheating the aggregates to required temperature and including the hire charges of Mobile Hot Mix Plant (Light Duty) and other machinery, pay of operators, cost of fuel and lubricants etc. complete to be followed by seal coat of either Type A or Type B as per Technical Specification Clause 508 for Rural Roads of MORD - Using Mobile HMP (Light duty).	Sq.M	R.O	137.80
8	Providing and applying tack coat with Cationic Bitumen Emulsion of approved grade conforming to IS: 8887-1978 on the prepared surface cleaned with Hydraulic broom, moistening the surface including cost and carriage of emulsion, hire charges of machinery and labour, cost of fuel and lubricants all complete as per Clause 503 of Specifications for Road & Bridge Works of MoRT&H (5th Revision)			
	(a) On Granular surfaces treated with primer (Using Bitumen emulsion at the rate of 0.25 to 0.30 kg per sqm.)	Sq.M	R.O	9.80
	(b) On Bituminous Surface (Using Bitumen Emulsion at the rate of 0.20 to 0.30 kg per sqm.)	Sq.M	R.O	9.10
9	Providing and laying Premixed Seal Coat (Type B) with approved quality grit @ 0.6 m ³ / 100 m ² and bitumen binder on thoroughly cleaned black top surface coated with tack coat, including heating and mixing cleaned sand/grit (100 % passing through 2.36 mm sieve and retained on 180 micron sieve) uniformly with bitumen binder, laying and spreading the mix at an uniform rate using suitable means, brushing the surface, if necessary, to ensure uniformity, followed by rolling with power roller including the cost and carriage of binder and aggregates, cost of heating the binder & aggregates and all other incidental charges, cost of fuel and lubricants, including hire charges of machineries, tools & plants required for construction and quality control complete as per Clause 511 of Specifications for Road & Bridge Works of MoRT&H (5th Revision). - By Manual Means with Hot Bitumen Binder (@ 6.80 kg / 10 Sq.m.)	Sq.M	R.O	41.50
10	Supplying, spreading and consolidating Moorum to a depth of 75 mm at desired density and C.B.R. as per specification with power roller to proper gradient and camber including watering as necessary, and lighting, guarding, barricading and making adequate earthen bundh where necessary to protect the edges and curing with water for 2 to 3 days, mending cracks by rolling where necessary including all incidental charges of roller, cost of fuel & lubricants etc. complete as per specification.(The payment is to be made on the basis of the finished compacted volume of moorum.)	Cu.M	R.O	706.00
11	Providing and applying 2.5 mm thick road marking strips (retroreflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour ,T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	Sq.M	R.O	391.25
12	Providing and laying Hump (speed breaker) of specified size with bituminous macadam and seal coat of specified grade by mobile hot mix plant with arrangement of proper road blockage including labour charge, fuel, hire charges of all necessary equipments etc. all complete.	Sq.M.	R.O	1179.06

Sl. No.	Description of Items	Unit	Quantity	Rate (₹)
13	Supplying & carriages and providing & laying the NP-3 RCC Hume Pipe 600 mm. dia. (outer dia. 750 mm.) for culvert in single row alignment as per proper location.	Mtr.	R.O	2914.00
14	Supplying, providing, cutting, fitting and fixing at ACP Sheet (3mm. thick) & laying Retro Finishing the Road Signage (as per design with stand) with earth cutting and PCC including alignment as per proper location. (Size: 600 x 600 mm)			
	a) With stand	Each	R.O	4049.00
	b) Without stand	Each	R.O	3098.00
15	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cu.M	R.O	5012.65
16	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per Clause 803 of Specifications for Road & Bridge Works of MoRT&H (5th Revision)	Sq.M	R.O	584.00

NOTE: THE RATES MENTIONED ABOVE ARE EXCLUSIVE OF GST.

I agree to execute the work _____ % [in figure] ABOVE/BELOW/ AT PAR (_____ percent) [in words] ABOVE/ BELOW/AT PAR Department estimated amount/ item rates.

Signature of Contractor with Date & Seal

योग: कर्मसु कौशलम्

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Tender Document for "Repair & renovation of MMM, LBS, Azad, Patel & Nehru 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 _____
_____) which is _____ % [in figure]
(_____ percent) [in words] ABOVE / BELOW / AT PAR Department item rates.

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)

Name of the Tenderer _____

(In Block letters)

Address: _____

