



INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
ENGINEERING UNIT, CHENNAI – 600 036

**ENVELOPE – 2 – Financial bid**

**1. Notice Inviting Tenders**

**Tender No: 31/ 2014 – 15 / Civil**

**EXECUTIVE ENGINEER,** Indian Institute of Technology Madras, Chennai - 600 036 invites sealed item rate tenders for the following work from the eligible contractors in two cover system.

**1. PARTICULARS OF WORK**

**1.1 Name of Work :** Addition and Alteration works at Institute buildings in Academic Zone for the year 2014-15.

- 1.2. Estimated Cost (For reference only) : **Rs 191.56 Lakhs**
- 1.3. Earnest Money Deposit (EMD) : **Rs 3, 84,000/-**
- :
- 1.4. Cost of Tender Document : Rs 1575/- including VAT
- 1.5. Time Period for Completion : **12 months**
- 1.6. Validity of the Tender : 90 days from the date of Opening of the tender
- 1.7. Date of Pre bid Meeting : **25 - 06-2014 – 10.30AM**
- 1.8. Last Date and Time for submission of the Tender : **08 - 07-2014 – 3.00pm**
- 1.9. Date of Opening of the Technical bid : **08 - 07-2014 – 3.10pm**
- 1.10. Place of submission of tenders: : Office of the **Executive Engineer,**  
Engineering unit, Administrative Building 3rd Floor  
IIT Madras, Chennai – 600 036.

**Executive Engineer (Civil)**

## INDEX

<b>S.No</b>	<b>Description</b>	<b>Page No</b>
1	Notice Inviting Tender	1-3
2	Tender	4-5
3	Acceptance of Tender	6
4	Conditions of Contract	7-16
5	Schedules	17-20
6	List of approved makes and brands	21-23
7	Bill of quantities	24-122
8	Additional Specifications	Annexure 1
9	Forms	
10	Special Condition for Protection of Environment	
11	Special condition for safety at the site	
12	Insurance	
13	C.P.W.D Form 8	
14	C.P.W.D safety code	
15	C.P.W.D contractors labour regulations	

**1.11 Deadline for submission of tender**

Tenders must be received by the Employer at the following address not later than **3.00 PM** on the date of opening mentioned. In the event of the specified date for the submission of the Tender being declared a holiday by the Employer, the Tenders will be received up to the appointed time on the next working day

**1.12. Address and place for Submission of Tender**

**The Executive Engineer**(Civil)

Engineering Unit, Administrative Building, 3<sup>rd</sup> floor,  
Indian Institute of Technology Madras  
Chennai – 600036.

- 1.13. The Employer may extend the deadline for submission of Tenders by issuing an amendment in writing in which case all rights and obligations of the Employer and the Tenderer previously subject to the original deadline will be subject to new deadline.

**1.14. LATE TENDER**

Tenders received late will not be accepted.

## **2. TENDER**

- 2.1. I/We have read and examined the notice inviting tender, schedules A & B, Specifications applicable, drawings, Conditions of contract and other documents and rules referred to in the conditions of contract and all other contents in the tender documents for the work.
- 2.2. I/We hereby tender for the execution of the work specified for the Indian Institute of Technology Madras, within the time specified in Schedule – 'F' and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in General Rules and Directions and in Clause 11 of Form 8 (General conditions of contract) and with such materials as are provided for, and in all respects in accordance with such conditions applicable.
- 2.3. I/We agree to keep the tender open for Ninety (90) days from the date of opening of tender and not to make any modifications in its terms and conditions
- 2.4. I/We agree that the EMD deposited by me/us be retained by IITM towards Security Deposit to ensure execution of all works referred to in the tender documents on the terms and conditions contained or referred to therein.
- 2.5. If I/We fail to furnish the prescribed performance guarantee as mentioned elsewhere within prescribed period, I/we agree that IITM shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely.
- 2.6. I/we agree that in case of forfeiture of earnest money as aforesaid, I/we shall be debarred from participating in the re-tendering process of the work.
- 2.7. If I/we fail to commence work as specified in clause 3A of the contract, I/we agree that IITM shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely,

2.8. I/We agree to carry out such deviations as may be ordered, up to a maximum percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the contract.

2.9. I/we hereby declare that I/we shall treat the tender documents, drawings and other records connected with the work as secret / confidential documents and shall not communicate the information derived therefrom to any person other than a person to whom I/we am / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

2.10. I/We hereby certify that the tender document downloaded is the exact copy of the document published by the IITM and no alterations and additions have been made by me / us in the tender document.

Signature of the Contractor

Dated

Signature of the Tenderer

Postal Address

Witness

Signature

Name

Postal Address

Occupation

### **3. Acceptance**

The above tender is accepted by me for and on behalf of the Board of Governors,  
IITM for a sum of  
Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_)

The letters referred to below shall form part of this contract Agreement:

- a)
- b)
- c)

For & on behalf of the Board of Governors, IITM.

Signature \_\_\_\_\_

Designation \_\_\_\_\_

Date \_\_\_\_\_

## **4. Conditions of contract**

### **4.1. Definitions**

In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-

1. The expression 'works' or 'work' shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed, whether temporary or permanent, and whether original, altered, substituted or additional.
2. The 'Site' shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
3. The 'contractor' shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
4. The 'Engineer-in-charge' means the Engineer who shall supervise and be in-charge of the work and who shall sign the contract on behalf of IIT as mentioned in Schedule 'F' hereunder.
5. 'Accepting Authority' shall mean the authority mentioned in Schedule.
6. 'Excepted Risks' are riots (other than those on account of contractor's employees), war, acts of God such as earthquake, lightening and unprecedented floods, and other such causes over which the contractor has no control and accepted as such by the Accepting Authority.
7. 'Market Rate' shall be the rate as decided by the Engineer-in-charge on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F' to cover all overheads and profits.
8. 'Schedules(s)' referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard schedule of Rates of the CPWD mentioned in schedule 'F' hereunder, with the amendments thereto issued up to the date of receipt of the tender.

9. 'Department' means IITM which invites the tenders.
10. 'District specification' means the specifications followed by the state of Tamil Nadu in the area where the work is to be executed.
11. 'Tendered value' means the value of the entire work as stipulated in the letter of award.
12. 'Employer means IITM
13. Where the context so requires, words imparting the singular also include the plural and vice versa. Any reference to masculine gender shall whenever required shall refer to feminine gender and vice versa.
14. Wherever the expression "Divisional Officer" appears in the Clauses, it should be substituted by the expression "EXECUTIVE ENGINEER
15. "Engineer in Charge" means EXECUTIVE ENGINEER, IITM, and the Engineer means the officer representing the Engineer-in-Charge of the Project.

#### **4.2. Authority to sign the tender document**

The tender must be signed by the person / persons competent to sign as indicated below. Same stipulations will also apply in the case of Receipt of payments for the work done.

1. If the Applicant is an individual, he should sign above his full typewritten name and current address.
2. If the Applicant is a proprietary firm, the Proprietor should sign above his full typewritten name and the full name of his firm with its current address.
3. If the Applicant is a firm in partnership, the Documents should be signed by all the Partners of the firm above their full typewritten names and current addresses. Alternatively the Documents should be signed by a Partner holding Power of Attorney for the firm and in this case a certified copy of the Power of Attorney should accompany the tender documents. In both cases a



certified copy of the Partnership Deed and current address of all the partners of the firms should be furnished.

4. If the Applicant is a limited Company, or a Corporation, the Documents shall be signed by a duly authorized person holding Power of Attorney for signing the Documents, accompanied by a copy of the Power of Attorney. The Applicant should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary

#### **4.3 .Instructions for filling the Bill of Quantities (Schedule A )**

1. Rate for each item shall be filled in words and figures and there shall be no discrepancy between the rate quoted in figures and words. However, if a discrepancy is found, the rate which corresponds with the amount worked out by the contractor shall unless otherwise proved, be taken as correct.
2. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct.
3. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rates quoted by the contractor, will, unless otherwise proved, be taken as correct and not the amount.
4. If no rate has been quoted for any item(s), leaving space both in figure(s), words(s) and amount, it will be presumed that the contractor has included the cost of this / these item(s) in other items and rate for such items(s) will be considered as zero and work will be required to be executed accordingly.
5. Amount must be quoted in full rupees only.
6. Special care should be taken to write the rates in figures as well as in words and the amount in figures in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs' should be written before the figure of 'Rupees' and the word ' P ' after the decimal figures, eg.' Rs 2.15P' and in case of words the word, "Rupees" should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only', it should invariably be up to two decimal places.

While quoting each rate in schedule of tender, the word 'only' should be written closely following the rate and it should not be written in the next line.

7. In the case of item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected
8. Tenders containing proposal for any alteration in the work or in the time allowed for carrying out the work, or which contain any other condition including conditional rebates, will be summarily rejected.
9. The officer inviting tenders shall have the right to reject all or any of the tenders and will not be bound to accept the lowest or any other tender.
10. The tender for the work shall not be witnessed by a Contractor or Contractors who himself / themselves has/have tendered for the same work. Failure to observe this condition would render tenders of the Contractor tendering, as well as witnessing the tender, liable to summary rejection.
11. In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such tender is liable to be rejected.
12. The tenderers shall sign a declaration under the Official Secret Act, 1923, for maintaining secrecy of the tender documents, drawings or other records connected with the work given to them.

#### **4.4. Refund / forfeiture of EMD**

1. In the event of a tender being accepted, a receipt for the Earnest Money forwarded therewith shall thereupon be given to that Contractor.
2. In the event of a tender being rejected, the Earnest Money forwarded with such unaccepted tender shall thereupon be returned to the Contractor remitting the same, without any interest.
3. Tender for the work shall remain open for acceptance for a period of 90 days from the date of opening of the Tender.
4. If any tenderer withdraws his tender before the said period or issue of acceptance, whichever is earlier or makes any modification in the terms and conditions of the tender which are not acceptable to the Institute, then IITM, shall without prejudice to any other right or remedy, be at liberty to forfeit 50 % of the said earnest money.

#### **4.5 Documents to be submitted upon acceptance of the tender.**

1. On acceptance of the tender, the name of the accredited representative(s) of the Contractor who would be responsible for taking instructions from the Engineer in Charge shall be communicated in writing to the Engineer in Charge.
2. The Contractor shall give a list of IITM employees related to him.

#### **4.6 Signing of Agreement.**

1. The successful contractor on acceptance of his tender shall within 14 days from the stipulated date of start of the work, sign the contract.

#### **2. Documents constituting the contract**

- a. Non judicial stamp paper for value not less than Rs.100 containing the brief description of the contract duly signed by both parties to the contract.
- b. The notice inviting tender, the financial bid and all other the documents including drawings, if any, forming the tender as issued at the time invitation of tender and acceptance thereof together with any correspondence leading thereto.
- c. Decisions taken in the Pre-bid meeting if conducted.
- d. Letter of acceptance
- e. Letter of award (After submission of Performance Guarantee)

#### **4.7 Special conditions**

1. Child Labour is strictly prohibited.
2. Construction labour shall not be permitted (except staff for watch and ward) to stay inside the campus and no labour camp shall be allowed to be set up inside the campus.
3. The construction activities and storage of materials shall be restricted within the area earmarked around the proposed building, which shall be barricaded with materials approved by IITM.
4. The contractor shall abide by the restrictions imposed by the security wing of the Institute on the working and on movement of labour, materials etc. and nothing extra shall be payable on this account. The contractor shall arrange for necessary photo identity passes for the labour for entry into the campus. Advance action for obtaining such passes shall be taken by the contractor and no claim on this account shall be entreated.
5. Movement of labour should be restricted to the areas where work is carried out. Workers should be made to confine themselves to the work areas and should not wander into the near by areas / buildings/ forest.
6. The work should be executed during day time only. If the work is required to be carried out in the night, necessary permission of the Engineer-in-charge shall be obtained. Contractor will make his own arrangement for lighting the area and no extra amount for carrying out the work during

night is payable. To the extent possible engaging women labour in the night shift should be avoided

7. The work shall be carried out with least hindrance to the adjoining buildings and offices and the contractor will be responsible for any damage, caused to the existing fixtures, electric fittings, cables, roads, pipelines etc. in the course of execution and the contractor shall make good any such damages for which nothing extra is payable.
8. Water for construction shall be arranged by the contractor. The contractor will not be allowed to use any of the water resources available within the campus nor will be permitted to dig any bore well inside the campus.
9. No plot rent shall be charged for materials stocked in the institute land during the course of construction with the prior approval the Engineer. All such materials shall be removed at the time of completion of the work.
10. The contractor shall make his own arrangement for electricity required during the construction period.
11. Tenderers shall inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the site and shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not. Submission of a tender implies that the tenderer has read the complete contract documents and is aware of the conditions, specification of the work to be done and of the local conditions and other factors having a bearing on the execution of work. Any claim either for extra amount or for additional time for execution due to ignorance about the site and working condition is not payable.
12. All documents forming the contract shall be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scaled.
13. In the case of discrepancy between the schedule of Quantities, the specifications and/or the Drawings, the following order of precedence shall be observed.
  - i. Description of item in the Schedule of Quantities.
  - ii. Particular Specifications and special conditions, if any
  - iii. Drawings.
  - iv. C.P.W.D Specifications
  - v. Specifications of B.I.S.
14. If there are varying or conflicting provisions made in any one document forming part of the contract, the Engineer-in-charge shall be the deciding authority with regard to the interpretation of the documents and his decision shall be final and binding on the contractor.

15. Any error in description, quantity or rate in schedule of Quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract. All such variations, errors additions, substitutions etc shall be decided as per the terms of the contract
16. The building work shall be carried out complying in all respects with the requirements of relevant bye-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-Charge and nothing extra will be paid on this account.
17. The work of water supply, internal sanitary installations and drainage work etc. shall be carried out as per the local body bye-laws and the contractor shall produce necessary completion certificate from such authorities after completion of the work, if required.
18. Where CPWD specifications are not available for fittings and fixtures, the same should conform to bye-laws and specification of the local Body. The contractor should engage licensed plumbers for the work.
19. The contractor shall comply with all legal orders and directions of the local or public authority or municipality and abide by them.
20. The contractor shall give a performance test of the installation(s) as per specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
21. Any cement slurry added over base surface (or) for continuation of concreting to obtain better bond between old and new concrete is deemed to have been included in the items and nothing extra shall be payable or extra cement considered in consumption on this account
22. The Rate for RCC works includes cost of concreting in sloped & curved roof, chajjas & beams and no extra rate shall be payable for concreting in such situations.
23. The rate for Centering & shuttering under concrete items will be the same for Centering & shuttering in curves & arches also unless specified otherwise in the BOQ.
24. The contractor should construct proper mortar bands of lean mix with adequate depth & size over the roof for flooding with water & proper curing. In case of Arches, wet gunny bags shall be used for a period of two weeks.
25. Holes and chase for water supply and drainage, etc, shall be provided as directed during progress of work without any claim for extra for finishing
26. The rate quoted for tiling on walls shall include providing the bevel edges for the corners or the PVC corner strips. No additional payment shall be payable on this account.
27. Sample of all materials, fixtures, flooring tiles, wall tiles, doors, windows, sanitary fittings, roofing sheets electrical fittings etc, shall be got approved in advance from the Engineer-in-Charge

before taking up the respective work. The contractor shall produce all the materials in advance so that there is sufficient time for testing and approving the materials and clearance of the same before their use in work.

28. The contractor shall be furnished, free of cost one certified copy of the contract documents except Standard Specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract
29. For any dispute arising out of this agreement, the legal jurisdiction will be at Chennai in Tamil Nadu only.
30. It is not binding on the competent authority to accept the lowest or any other tender and any or all the tenders received can be rejected without assigning any reason.
31. Canvassing whether directly or indirectly, in connection with tender is strictly prohibited and the tenders of the contractors who resort to canvassing will be liable to rejection.
32. The competent authority reserves the right to accept part of the tender and the tenderer shall be bound to perform the same at the rates quoted.
33. The contractor shall associate an Electrical contractor of the appropriate class to carry out the electrical works. But it is the principal contractor who is responsible for completion of the Electrical work also as per contract. No agreement is created between the Electrical contractor associated by the tenderer and IITM in this regard.
34. Other agencies related to this project will also simultaneously execute their part of works and the contractor shall cooperate and allow smooth working of all such agencies. The contractor shall leave such holes, openings etc, for laying / burying of pipes, cable, conduits, clamps, boxes and hooks for fans etc. as may be required for other agencies. Conduits for electrical wiring shall be laid in such a way that they leave enough space for concreting and do not adversely affect the structural members. The rates quoted for the items of work are deemed to include charges for coordinating with all such agencies and nothing extra is payable on this account.
35. The following events will take place in the Campus which may hinder the progress of work.

The duration of the events are

- a. Shaastra and Saarang - 10 days (normally in January)
- b. Convocation - 2 days (normally in July)

The completion time stipulated in the contract is deemed to have included the above, if they happen during the duration of the contract.

#### **4.8 General Conditions:**

1. The particular specification for certain items in the Financial bid – Volume – II – Part 1 – Civil work - Bill of Quantity (BOQ) is enclosed as Annexure 1 and the same shall be read in conjunction with the corresponding specification given in the BOQ.
2. Site barricading details and material yard layout is enclosed as Annexure 2.
3. Spillover of any construction materials / earth on the road surface should be cleared immediately.
4. The contractors are requested to inspect the site before submission of tender documents. After prebid meeting, the Site and material yard location will be shown to interested contractors.
5. IIT Madras will not supply water for construction and domestic requirements.
6. Electricity / power requirement shall be arranged by the contractor. Necessary temporary connections from local authority / DG set will be arranged by the contractor. No extra claim will be entertained for the same.
7. No trees and vegetation shall be cut by the contractor.
8. All construction activities and labour movements should be restricted within the area earmarked for these purpose.
9. No labour camp is allowed inside IIT Madras campus.
10. Firewood collection is strictly prohibited.
11. Site yard shall be barricaded as per the drawing approved by IIT Madras. No additional payment will be made for the same.
12. All debris generated in the site premises / material yard should be removed and disposed outside IIT Madras campus. Necessary approval from local authority shall be obtained by the contractor. No additional charges will be paid for the same.
13. IIT Madras traffic regulation and speed limit should be followed without any violation.

14. In case of violation of any rules by the contractor, penalty will be levied by IIT Madras at the following rate.

<b>Sl.No</b>	<b>Operations</b>	<b>Penalty per day</b>
1	Construction labour shed without approval from Engineer-in-charge	Rs5000/- per shed per day
2	Labour wanders in to the nearby areas / buildings / forests.	Rs500/- per person
3	Thrown food items / waste / package item inside or outside the site premises	Rs1000 per day
4	If water stagnation inside the construction site.	Rs500 per day
5	Dumping of debris and storage of outside the barricaded area.	Rs25000 per day
6	Improper maintenance of barricade.	Rs5000 per day
7	Improper sanitation of labour toilets	Rs1000 per day
8	Collection of firewood	Rs2500 per day



## 5. SCHEDULES

**Schedule 'A'** - The Bill of Quantities enclosed in this document.

**Schedule 'B'** - Schedule of materials proposed to be issued to the tenderer

NO MATERIAL SHALL BE ISSUED TO THE TENDERER BY IITM

**Schedule 'C'**- Schedule of tools and plants proposed to be hired to the tenderer

NO TOOLS AND PLANTS SHALL BE HIRED TO THE CONTRATOR BY IITM

**Schedule 'D'** - Extra schedules for specific requirements / documents for the work, if any.

**Schedule 'E'**- Price escalation Clause – 10C only applicable to this contract.

**Schedule 'F'**

**Name of work :** Addition and Alteration works at Institute buildings in Academic Zone  
for the year 2014-15.

Estimated cost of work : Rs 191.56 Lakhs

Earnest money : Rs.3,84,000/-

Performance Guarantee : 5% of the tendered value

Security Deposit : 5% of the tendered value

### General Rules and Directions:

Officer inviting tender EXECUTIVE ENGINEER (Civil), IITM

Maximum percentage for quantity of items work  
to be executed beyond which rates are to be  
determined in accordance with clause 12.2 and 12.3. } See below

### Definition

Engineer-in-charge EXECUTIVE ENGINEER (Civil)

Accepting authority Director, IIT Madras

Percentage on cost of material and labour to cover all overheads and profit 15%

Standard schedule of rates CPWD DSR 2013

Department IIT Madras

Standard CPWD contract form CPWD form 8 with upto date Modification and correction

### Clause 1

i.) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance in days. 7 (seven)\_Days

(ii) Maximum allowable extension beyond the period provided above 7(Seven) Days.

### Clause 2

Authority for levying compensation under clause 2. EXECUTIVE ENGINEER

**Clause 2a**

Whether clause 2a shall be applicable : Yes applicable.

**Clause 5**

Number of days from the date of issue of  
letter of acceptance for reckoning the date of start : 14 Days

Time allowed for execution of work : 12 months

Authority to give fair and reasonable

Extension of time for completion of work : EXECUTIVE ENGINEER(Civil), IITM

**Clause 6, 6A** : Clause 6A shall be applicable.

**Clause 7**

Gross work to be done with net  
payment after adjustment of advances for material  
collected, if any, since the last such payments: Rs. 15.00 Lakh  
for being eligible to interim payment.

**Clause 10A - List of Testing equipments to be provided as listed in this  
document - NOT APPLICABLE**

**Whether Clause 10B (ii) shall be applicable :** Yes

**Clause 10 CA and 10C**

**Clause 10C only applicable**

**Clause 10 CA NOT applicable to this work.**

**Clause 10C shall be applicable for the extended period of contract if the extension so granted is without  
levy of compensation**

**Clause 10CC** : Not applicable.

**Clause 11**

Specification to be followed for execution of work

CPWD Specifications 2009 Volume I to II and revised CPWD Specifications up to date, general specifications for electrical works part – I 2004, general specifications for electrical works part-IV Sub Station 2007.

**Clause 12**

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work (Excluding foundation) 50%

Deviation limit beyond which Clauses 12.2 & 12.3 shall apply for foundation work. } 100%

**Clause 16**

Competent Authority for deciding reduced rates for items which are not as per specification **EXECUTIVE ENGINEER**(Civil) IITM

**Clause 36(i) Technical Personnel to be employed at site.**

Designation	Minimum qualification and experience required	Discipline	Rate of recovery per month
Principal Technical Representative	Graduate with 10 years experience - 1 No.	Civil Engg.	Rs. 30000
Technical Representatives	Graduate with minimum 5 years of experience - 1 No.	Civil Engg.	Rs. 20000
	Diploma in Engineering with minimum 5 years of experience – 1 No.	Civil Engg.	Rs. 15000

## 16.0 LIST OF APPROVED MAKE / BRAND

**16.1** IITM reserves the right to select any of the make/brand shown below and only those makes/brands will be allowed to be used in the work. Nothing extra is payable even if there is cost difference between one make/brand and another.

### 16.2 Civil Works

Sl no	MATERIAL	BRAND / MANUFACTURER NAME
<b>BUILDING MATERIALS</b>		
1	Cement OPC 53 grade / PPC super grade	ACC / Ramco / Ultra Tech / Chettinad/Zuari/Birla Ambuja
2	Steel Fe 500 grade	TATA / SAIL / TISCO / RINL
3	Fly ash concrete block	Confirming to IS 2185
4	Wood	First class red padak / Kongu/ Second class teak
<b>JOINERY</b>		
1	Paneled single door shutters	Century ply board, Bajaj, Archid Ply, Green ply - eco tech products
2	Flush Door	Jackson/Green ply/Kenwood/Prestige
2	Particle board exterior grade	Novapan/ Ecoboard/Bhutan board/ Archidply/Green ply
	Veneer	Jackson/Archid ply/Century Ply
	BWR Ply wood	Century ply/Archid ply/Century Ply
3	Stainless steel butt hinges	Godrej, ISI Appd brand
4	MS Piano hinges	ISI marked, IS 3818
5	Stainless steel Tower bolts	Godrej, ISI Appd brand

6	Brass mortice lock and other brass fittings	Godrej, ISI Appd brand
7	Satin nickel door lock	Godrej LKUDWICN ultra twin bolt / ISI Appd brand
8	Stainless steel cylindrical keyed door lock with knob	Godrej, ISI Appd brand
9	Multi purpose round lock	Godrej, ISI Appd brand
10	Brass hanging type floor door stopper / Casement stays and other brass fittings	Godrej / Imax
11	Aluminium fittings	Jal /crown / classic
12	Aluminium extrusions	Indal / Jindal
13	Glass	Saintgobain / Modifloat/ Pilkington
14	Door closer	Everite / Hardwyn / Dorma/Dyna
15	Floor stopper	Godrej / Everite/Dorma/Dyna
16	Rubber wood	RUBCO / ISI Appd brand
17	PVC Rigid foam sheet	M/s Rajshri / ISI appd Brand
<b>PAINTS</b>		
1	Water proofing cement paint	Snowcem plus / Durocem, White Cement - Birla white / J.K.White/ Asian white/Nippon
2	Interior emulsion paint	Berger - Bison, ICI - Supercote, Shalimar, Nippon & Jenson & Nicholson.
3	Weather seal matt finish paint (Exterior)	Berger - Weather coat all guard, ICI - Weather shield, Shalimar, Nippon & Jenson & Nicholson.
4	Synthetic enamel paint	Dulux ICI, Berger, Shalimar, Nippon & Jenson & Nicholson
5	Acrylic putty	Altek / Asian / ICI / Berger
6	French polish	Sheenlac / Asian/ Berger
<b>FLOORING MATERIALS</b>		
1	Rectified ceramic floor tile	Nitco /Jhonson / Kajaria/ Somany
2	Ceramic glazed floor tile	Nitco / Jhonson / Kajaria/ Somany

3	Ceramic glazed wall tile	Johnson , Kajaria, Burma Walnut, Nitco Johnson , Kajaria
4	Granite for urinal partition	Jet black/ Black galaxy/ Tiger brown/ Ruby red
5	Granite for computer table top	Jet black/ Black galaxy/ Tiger brown/ Ruby red
WATERPROOFING		
1	Water proofing material	Impermo – Snowcem / Roff / Fosroc /BASF/ CICO
STEEL MATERIALS		
1	Stainless steel pipe	IS 304 Grade Salem Stainless steel/ Vizag
2	G.I Pipe	TATA / APPOLO
3	C.I/D.I Pipes	Lanco or equivalent
4	Pipe Fitting	R brand / Unique
5	Valves & Fixtures	Kirloskar / Audco / Leader

#### NOTE

The Successful tenderer shall submit test reports for all the materials / equipments. If any make is not in accordance with the tender specification it will not be accepted even if the make is indicated in the above List.

## 17. BILL OF QUANTITIES

Name of the work: Addition and Alteration works at Institute buildings in Academic Zone for the year 2014-15.

Tender No : 31 / 2014 - 15 / Civil.

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
1	150	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30cm measured at a height of 1m above ground level	Sqm		
2	150	Clearing grass and removal of the rubbish upto a distance of 50m outside the periphery of the area cleared	Sqm		
3		Providing and fixing on wall faced un-plasticized - PVC moulded fitting / accessories for un-plasticized - Rigid PVC rain water pipe			
3.1		Coupler			
a	15	75mm	Each		
b	15	110mm	Each		
3.2		Single Tee with door			
a	13	75 x 75 x 75 mm	Each		
b	13	110 x 110 x 110 mm	Each		
c	15	160x160x160mm	Each		
3.3		Single Tee without door			
a	13	75 x 75 x 75 mm	Each		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>b</b>	13	110 x 110 x 110 mm	Each		
<b>3.4</b>		Bend 87.5 degree			
<b>a</b>	35	75mm bend	Each		
<b>b</b>	30	110mm bend	Each		
<b>c</b>	25	160 mm dia	Each		
<b>3.5</b>		Shoe (Plain)			
<b>a</b>	8	75mm shoe	Each		
<b>b</b>	8	110mm shoe	Each		
<b>c</b>	5	160 mm shoe	Each		
<b>4</b>		Providing and fixing un-plasticized PVC pipe, clips of approved design to un-plasticized - PVC rain water pipe by means of 50 x 50 x 50 mm hard wood plugs.			
<b>a</b>	35	75mm	Each		
<b>b</b>	30	110mm	Each		
<b>c</b>	80	160 mm	Each		
<b>5</b>	50	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15cm diameter and weighing not less than 440 gms each.	Each		
<b>6</b>	100	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 Sqm and under including cutting the patch in proper shape and preparing and plastering the surface of the walls With cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>7</b>		Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding holdfast in cement concrete blocks with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal			
<b>a</b>	40	Door Chowkhats	Each		
<b>b</b>	45	Window Chowkhats	Each		
<b>8</b>		Providing and fixing of glazing to door/ window/ ventilator shutter and partition etc with pvc neoprene gasket / wooden reapers / necessary adhesives etc complete as per the direction of engineer in charge (Saint Gobain / Modifloat).			
<b>a</b>	100	4mm thick float glass	Sqm		
<b>b</b>	150	5.5mm thick float glass	Sqm		
<b>c</b>	25	8mm thick float glass	Sqm		
<b>d</b>	10	12 mm thick float glass	Sqm		
<b>9</b>	5	Demolishing lime concrete and disposal of material within 50m lead.	Cum		
<b>10</b>		Demolishing cement concrete including disposal of material within 50m lead			
<b>a</b>	30	1 : 3 : 6 or richer mix	Cum		
<b>b</b>	35	1 : 4 : 8 or leaner mix	Cum		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
11	60	Demolishing Brickwork including stacking of serviceable material and disposal of unserviceable material within 50m lead In cement mortar	Cum		
12		Dismantling doors, windows and clerestory windows (Steel or wood) shutter including chowkhats, Architrave, Holdfasts, etc. complete and stacking within 50m lead :			
a	75	Of area 3 sqm and below	Each		
b	25	Of area beyond 3 sqm	Each		
13		Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50m lead			
a	450	For thickness of tile 10mm to 25mm	Sqm		
b	200	For thickness of tiles above 25mm and upto 40mm	Sqm		
14	60	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 m lead of : Asbestos sheet	Sqm		
15		Dismantling G.I./ CI Pipes (external work) including excavation and refilling trenches after taking out the pipes,			
a	50	15 mm to 40 mm nominal bore	Rm		
b	50	above 40 mm nominal bore	Rm		
16	100	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 m lead	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
17	50	Cutting holes upto 30 x 30 cm in walls including making good the same With F.P.S. bricks	Each		
18	13	Cutting holes upto 15 x 15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Each		
19	80	Making chases upto 7.5 x 7.5 cm in walls including making good after housing G.I. Pipe etc.	Rm		
20	60	Making hole upto 20 x 20 cm and embedding pipes upto 150 mm diameter in masonry and filling with cement concrete 1 : 3 : 6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Rm		
21	100	Providing and laying floor first quality antiskid ceramic tiles (Johnson/Kajaria) for floors of size 300x300x10mm or higher size and minimum thickness of approved shade and pattern in flooring for toilet on bed plaster CM 1:4, 20mm thick with sieved sand mixed with approved water proofing compound (CICO / ROFF),	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
22	250	Providing and laying floor first quality ceramic tiles Johnson/kajaria/Somany for rooms, floors of size 300x300mm or higher size and minimum thickness of approved shade and pattern in flooring over a bed plaster CM 1:4 with approved water proofing compound (CICO / ROFF),	Sqm		
23	200	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer -in-charge, in skirting, risers of steps and dados, over 12mm thick bed of cement mortar 1:3 (1 cement:3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm , including pointing in white cement mixed with pigment of matching shade complete.	Sqm		
24	25	Providing and fixing 16mm MS fan clamps of standard shape and size in existing RCC slabs including cutting chase and making good and painting exposed portions of the clamps complete.	Each		
25	8	Demolishing RCC work by mechanical/manually including stacking of steel bars and disposal of unserviceable material within 50m lead.	Cum		
26		Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the materials within 50 m lead			
a	80	75 mm to 80 mm dia pipe	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>b</b>	70	100 mm dia pipe	Rm		
<b>c</b>	50	150 mm dia pipe	Rm		
<b>27</b>	12	Supplying and fixing CP towel rail of size 20mmx600mm long including fixing in position as directed (Metro/Parryware).	Each		
<b>28</b>	25	Finishing with Epoxy paint (2 or more coats) at all locations prepared and applied as per manufacturer's specification including appropriate priming coat, preparation of surface etc complete. On steel work (Asian/Berger/ICI).	Sqm		
<b>29</b>	16	Lettering with Black Japan paint of approved brand and manufacture	per letter per cm ht.		
<b>30</b>	40	Re-lettering with black Japan paint of approved brand and manufacture	per letter per cm ht.		
<b>31</b>	50	Painting (One or more coats) with black Japan paint of approved brand and manufacture to give an even shade	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
32	25	Making opening in brick masonry including dismantling, fixing chowkhats in floors or walls cutting masonry and fixing holdfasts in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) for door / window	Sqm		
33	20	Dismantling and stacking with in 50m lead Fencing post or struts including all earth work and dismantling of concrete in RCC etc complete.	Each		
34	24	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50m lead	kg		
35	15	Repairing rolling shutter by replacing the old damaged or worn out parts like bearing, Gears, shafts, laths, springs and applying wax to all parts and making into good condition etc complete.	Sqm		
36	500	Removing of existing Vinyl Flooring and thoroughly cleaning of base adhesive including removing of unserviceable materials etc.	Sqm		
37		Providing and fixing homogeneous polyvinyl chloride sheet / tile in flooring and skirting in approved pattern on a smooth and damp proof base using rubber adhesives of approved quality and manufacturer like Dunlop S-758, Fevicol SR 998			
a	100	1.5mm thick	Sqm		
b	250	2.0mm thick	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
38	150	Earthwork in Excavation in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil All kinds of soil	Cum		
39		Excavating trenches of required width for pipes, cables etc. including excavation for sockets, and dressing of sides and ramming of bottoms, depth upto 1.5m, including getting out the excavated soil and then returning the soil as required, All kinds of soil			
a	25	Pipes, cables etc. not exceeding 80mm dia	Rm		
b	25	Pipes, cables etc exceeding 80mm dia but not exceeding 300mm dia	Rm		
40	200	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth : consolidating each deposited layer by ramming and watering, lead upto 50m and lift upto 1.5m	Cum		
41	50	Supplying and filling in plinth with river sand under floors including watering, ramming, consolidating and dressing complete	Cum		
42		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :			
a	15	1:2:4 (1 cement :2 coarse sand:4 graded stone aggregate 20mm )	Cum		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>b</b>	20	1:3:6 (1 cement :3coarse sand :6 graded stone aggregate 20mm)	Cum		
<b>c</b>	40	1 : 4 : 8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	Cum		
<b>d</b>	15	1:5:10 (1 cement :5 coarse sand :10 graded stone aggregate 40mm )	Cum		
<b>43</b>	5	Providing and fixing upto floor five level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases etc. including hoisting and setting in position 1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 grade stone aggregate 20mm nominal size)	Cum		
<b>44</b>		Reinforced Cement Concrete work in beams, suspended floors, roofs having slope upto 15 degrees, landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral staircases upto floor five level excluding the cost of centering and shuttering – M 25 grade concrete.			
<b>a</b>	13	All works upto plinth level	Cum		
<b>b</b>	13	All works above plinth level upto floor V level	Cum		
<b>C</b>	50	Providing and laying in position of RCC of grade M35 Concrete with super plasticizers for walls and floors, columns, beams and slabs excluding cost of centering, shuttering, finishing and reinforcement etc complete at all levels as per the direction of Engineer in charge.(minimum cement content 380 kg/cum.	Cum		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
45	200	Providing centering shuttering and form work for RCC works for all applicable RCC items in this schedule using best quality of film coated plywood / MS Sheets centering and shuttering materials, for required heights and sizes in all floors and all levels including charges for de-moulding agent, removal of form work etc complete at all levels.	Sqm		
46	2500	Supplying cutting bending and fabricating and placing in position as directed steel (SAIL, TISCO or RINL) reinforcement for RCC works in all floors, using MS or High Strength Deformed bars/RTS and MS binding wire 18 gauge etc complete at all levels.	Kgs		
47		Brick work with Fly ash concrete blocks of class designation M100 in foundation and plinth in			
a	70	Cement mortar 1:6 (1 Cement : 6 coarse sand)	Cum		
b	30	Cement mortar 1:4(1cement :4 coarse sand)	Cum		
48	60	Add Extra for brick work with Fly ash concrete blocks in superstructure above plinth level upto floor V level	Cum		
49	125	Half Brick masonry with fly ash concrete blocks of class designation M100 in foundation and plinth in : Cement mortar 1:4 (1 Cement : 4 Coarse sand)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
50	100	Extra for half Brick fly ash concrete block masonry in superstructure above plinth level upto floor V level	Sqm		
51	75	Providing and fixing 18mm thick mirror polished, machine cut Granite for kitchen platforms, vanity counters, fascia and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1 : 4 (1 cement : 4 coarse sand) Granite black Area of each slab above 0.50 sqm	Sqm		
52	50	Extra for providing edge moulding to 18mm thick stone counters, vanities etc., including machine polishing to edge to give high glass finish etc., complete as per design approved by Engineer - in - charge Granite work	Rm		
53	250	Cement Concrete flooring 1:2:4 (1 Cement : 2 Coarse sand : 4 graded stone aggregate) finished with a floating coat of neat Cement including cement slurry, but excluding the cost nosing of steps etc. complete 40 mm thick with 20 mm nominal size stone aggregate	Sqm		
54	50	Cement plaster skirting (upto 30 cm height) with Cement 1 : 3 (1 Cement : 3 Coarse sand) finished with the floating coat of neat cement 18 mm thick	Sqm		
55	50	Add Extra for making chequers of approved pattern on cement concrete floors, steps, landing , pavements etc	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
56	250	Lime concrete terracing on roofs average thickness 10 cm laid to fall with 25 mm nominal size brick aggregate and 50% lime mortar 1 : 2 (1 lime putty : 2 surkhi) rammed and finished with gur and belgiri treatment complete including rounding of junctions etc complete at all levels.	Sqm		
57	250	Providing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness and approved size) on roofs jointed with cement mortar 1 : 4 (1 Cement : 4 Coarse sand) mixed with 2% of integral water proofing compound (CICO/ROFF) laid over a bed of 20 mm thick cement mortar.	Sqm		
58		Providing and fixing on wall face un-plasticized - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10mm gap for thermal expansion (Finolex/Prince/Supreme).			
a	100	Single socketed pipe 75mm diameter	Rm		
b	90	Single socketed pipe 110mm diameter	Rm		
c	70	160 mm diameter pipe	Rm		
59	250	12 mm cement plaster of mix : 1:4 (1 Cement : 4 Fine sand)	Sqm		
60	250	12mm cement of plaster of mix 1:4 (1 Cement : 4 Coarse sand)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
61	250	15mm cement plaster on rough side of single or half brick wall of mix : 1:4 (1 Cement : 4 Coarse sand)	Sqm		
62	100	6mm Cement plaster to ceiling of mix : 1:3 (1Cement : 3 Fine sand )	Sqm		
63	25	Providing and laying of Cuddapah slab of 20mm thick over a bed mortar of cement mortar 1:4 20mm thick including charges for labour, materials, polishing the exposed surface and transportation etc.,	Sqm		
64	5	Providing and fixing ball bearing for rolling shutters	Each		
65	250	Providing and fixing hand rail by welding etc to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer (zinc chromate yellow primer) GI pipes 40 mm nominal bore (Class B)	Kgs		
66	25	Supplying and filling with shell lime and sand in 1:2 in plinth under sand filling in layers not exceeding 20cm in depth: consolidating each deposited layer by ramming and watering etc. .	Cum		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
67	150	Supplying and laying of 60mm thick M30 grade Interlocking concrete blocks tested in accordance with BS6717 Part-I, 1986; manufactured using homogeneous designed concrete mix, vibro-compaction process, weigh batching and high speed pan mixing suitably cured in controlled conditions and laying the same over a 50mm thick sand bedding layer level and slope etc.,	Sqm		
68	5	Labour charges for repairing MS gate of size 1.5x1.5m garage door, consisting of cutting the bottom section of corroded MS gate, garage door, window grill, introducing necessary MS Angle/Flat/Pipe at the bottom welding grind complete. Finishing with zinc chromate primer etc.,	Each		
69	2500	Structural Steel work welded in built up sections / tubular sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer (Zinc chromate primer) all etc	Kgs		
70	25	Providing and fixing in position collapsible steel shutters with vertical channels 20 x 10 x 2 mm and braced with flat iron diagonals 20 x 5 mm size with top and bottom rail of T iron 40 x 40 x 6 mm with 40 mm dia., steel pulleys complete with bolts, nuts as directed by the Engineer in charge in all levels.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
71	10	Supplying and fixing Rolling shutters of approved make ISI specified, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed shaft with brackets, side guides and arrangements and top cover with 1.25 mm thick.	Sqm		
72a	10	Extra for providing mechanical device chain and crank operation for operating rolling shutters Exceeding 10.00 sqm and upto 16.80 sqm in the area	Sqm		
72b	10	Do - but Exceeding 16.80 sqm in area	Sqm		
73	25	Fixing standard steel glazed doors, windows and ventilators ISI specified in walls with 15 x 3 mm lugs 10 cm long embedded in cement concrete blocks 15 x 10 x 10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stones aggregate 20 mm nominal size ) or with wooden plugs etc complete.	Kg		
74	100	Providing and laying VITRIFIED TILES of Johnson/Kajaria/Somany or equivalent as approved by Engineer in charge (Marble series) of size 600X600X10mm neatly laid over tile fixing or laid in cement mortar 1:4, 20mm thick.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
75	40	Supplying and fixing Eurocon/Gripton/Beton or equivalent step tiles of approved make and pattern from pavement series for external / internal flooring over 20mm thick cement mortar 1:4 bed, jointed with cerafil as equivalent matching pigments to match the color of the tiles as directed by the Engineer-in-charge etc., complete	Sqm		
76	375	Providing and Laying of RECTIFIED tiles of Johnson/Khajaria/Somany size 400x400x7mm or higher size neatly laid in cement mortar 1:4 20mm thick of equivalent joint finished with matching colouring pigments to match the colour of the tiles rate to inclusive of laying and preparation of existing surface by hacking etc., complete all floors	Sqm		
77 a	100	Supplying and Fixing vertical blinds of size 2"x1" Aluminium Powder coating channel acrylic runner, 100mm breadth quality matt cloth tilting metal rope, nylon cord, bottom metal plate, metal clamp screws and washable PARYTEX imported cloth etc., complete	Sqm		
77b	25	Supplying and Fixing roller blinds of size required as per site condition with Aluminium Powder coating channel including all other accessories for smooth operation metal rope, nylon cord, bottom rod, metal clamp screws and washable PARYTEX imported cloth etc., complete	Sqm		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
78	500	Towards charges for cleaning the substation area including clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30cm measured at a height of 1m above ground level and removal of rubbish up to a distance of 50m outside the periphery of the area cleared.	Sqm		
79	150	Supply and installation of pre-coated Galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50mm+/-5%total coated thickness (TCT) thick zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns minimum and should have a protective guard film of 25 microns minimum to avoid scratches white transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self-drilling/self-tapping screws of size (5.5x55mm)	Sqm		
80		Providing and fixing pre-coated Galvanizes sheet roofing accessories 0.50mm +- 5% total quoted thickness (TCT) zinc coating 120 GSM as per IS 277 in 240 MPa steel grade 5-7 micron epoxy primer on both side of the sheet and polyester top coat 15 to 18 microns using self-drilling by self-tapping screws or with polymer coated Z or L hooks bolts and nuts and GI seam bolt and nut, GI plain and bitumen washer complete at all levels.			
a	30	Ridge plate (500 to 600 mm)	Rm		
b	25	Flashing up to 600mm	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
c	25	North light	Rm		
d	25	Barge board up to 300mm	Rm		
e	50	Crimp curve	Sqm		
f	50	Gutter (600mm overall girth)	Rm		
81	25	Providing and laying of 18mm thick Mirror polished Raw silk Granite laid over 20mm thick base cement mortar 1:4 with pointing of the joints in matching pigment and etc complete as per the direction of Engineer-in charge - Area of slab upto 0.50sqm	Sqm		
82	8	Supplying and fixing of 20mm thick Cuddapah Sink of size 600x450x250mm with top all-round edge polishing and edge moulding etc., complete.	Nos		
83	10	Supplying and fixing of 20mm thick Cuddapah Sink of size 600x600x250mm with top all-round edge polishing etc., complete.	Nos		
84	13	Hire Charges for Tractor carting of various materials, furniture's, machineries, accessories, waste materials including loading, unloading and transporting etc., complete within the IIT Premises(size - 3.12 x 1.77 x 0.46)	Load		
85	38	Providing and fixing 25mm tk Kota stone slab over 20mm (Average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of 1:4 (1 Cement : 4 Coarse Sand)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
86	50	Supplying and filling of quarry dust in layer not exceeding 20cm and watering each layer thoroughly with consolidation and ramming etc., complete for basement and in foundation.	Cum		
87	25	Providing and fixing of 50x4mm Poly sulphate Sealant for aluminium joineries joints including fixing leaky piece etc.	Rm		
88	250	Supplying and fixing "Daiken" Acoustical ceiling with regular grid system at all levels. Providing and fixing Daiken mineral fiber ceiling tiles, false ceiling with hot dipped galvanized steel grid work. Surface chemicals cleaned capping pre-finished in baked polyester paint main tiles of size 600x600mm as per manufacturer specification.	Sqm		
89	50	Supplying and fixing "Daiken" metal ceiling with regular grid system at all levels. Providing and fixing Daiken mineral fiber ceiling tiles, false ceiling with hot dipped galvanized steel grid work. Surface chemicals cleaned capping pre-finished in baked polyester paint main tiles of size 600x600mm as per manufacturer specification.	Sqm		
90	50	Providing and fixing of 75mm x 25mm size MS weld mesh paneling for window shutter with second class Teak wood beadings (69mmx19mm) all-round the shutter mesh including necessary primer coat ,screws, nails etc., complete (Wood work for shutter frame will be paid separately).	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
91	5	Providing and fixing of corner piece of 18mm thick granite slab of shape square or round of size 30cmx20cm with necessary edge moulding in toilet and laboratory including chasing of wall and grouting the same to match the existing surface and colour etc.,	Nos		
92	15	Providing and fixing of Porcelain Urinal channel of approved brand and make with base mortar 1:3 and pointing with white cement etc., complete (Parryware/Hindware).	Rm		
93	250	Supplying and fixing of 450mm width G.I. Pipe ladder with 40mm dia G.I. Pipe vertical supports, 20mm dia G.I. Pipe horizontal supports for tread at 300mm c/c with 840mm height both side hand railing, top, bottom and middle are supported by 50mm dia G.I. pipes, grouting on wall including two coats of enamel paint over a coat of primer etc., complete as per IS specification.	Kgs		
94	1500	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections For fixed portion / shutters	Kgs		
95	100	Providing and fixing of border tiles in bath room made of ceramic embossed designed tiles of size 80mmx200mmx7mm as per direction of Engineer-in-charge (Johnson/kajaria/somany).	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
96	50	Providing and fixing of GI weld mesh safety shutter by using GI weld mesh of 2"x2"(16 gauges) welded with MS angles 40x6mm all-round with 20x6mm flat MS angle fixed with the support including one coat of zinc chromate primer and two coats of synthetic enamel paint and labour charges etc., complete (Asian/ICI/Berger).	Sqm		
97	600	Supplying and Erection of Double Scaffolding (Area shall be calculated by multiplying length and height of scaffolding) for carrying out of miscellaneous works at all levels and etc., complete as per Indian Standard or relevant codes.	Sqm		
98	125	Applying a coat of bituminous primer @ 0.3kg/m <sup>2</sup> , by brush and Providing & laying APP membrane 5 or more layered 3mm thick, softening point not less than 150 <sup>0</sup> C,tensile strength (L/T) N/5cm should be 650/450,lap joint strength (L/N) N/5cm 650/450, APP modified waterproofing membrane reinforced with 180 GSM non-woven polyester matt and without central separation layer of polyethylene film, skin layers top and bottom should be not more than 9 micron thickness, with 10cm over laps, by torch on application and applying a coat of bituminous based solar reflective aluminum paint @.0.3kg/m <sup>2</sup> including necessary surface preparation , cleaning with wire or coir brush, tools tackles labour etc., complete	Sqm		
99	2500	Terrace cleaning by removing dry leaves, unwanted materials and removal of plantation growth as per the direction of the Engineer in charge for all levels.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
100	10	Providing and neatly finishing of 300mm dia exhaust fan holes and above with necessary scaffolding, plastering and painting to matching the existing finishing etc., complete as per the directions of Engineer in charge.	No		
101	200	Preparing and washing the wall tiles using approved chemical agents and soap oil including necessary brushes and filling the tiles gaps with white cement wherever necessary and etc complete as per the directions of Engineer in charge.	Sqm		
102	50	Extra charges for providing Antistatic poly vinyl Button model flooring sheets instead of Poly vinyl sheets and etc complete as per the direction of Engineer in charge. (Armstrong / Wonder floor)	Sqm		
103	25	Providing and fixing wall paneling using 1mm laminate sheet (Greenlam / Sunmica) over 12mm thick BWR plywood (Kitply / century ply)and with, necessary teak reaper including necessary CP screws, adhesives (fevicol) & priming coat on exposed surface etc complete as per the direction of Engineer in charge.	Sqm		
104	5	Providing and fixing of counter top / below 580mm size Oval shape white Colour Wash basin (Hindware / Parryware) with C.P. waste coupling (Metro / Parryware)and necessary white cement and etc complete as per directions of Engineer in charge.	No		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
105	5	Making and Cutting of oval shape / round opening in the granite for fixing wash basin / sink and neatly finishing etc complete as per the directions of Engineer in charge.	No		
106	500	Providing and fixing of 6mm thick chequered plate for steps / cable trenches with necessary cutting, welding and edge grinding etc using grinding machine over welded the required angles and stiffeners and making holes etc complete as per the direction of Engineer in charge.	Kg		
107	13	Providing and fixing of 12mm dia and 200mm length Hilti Expansion Fastener including necessary drilling of beam concrete etc, complete at all levels as per the directions of Engineer in charge	Each		
108	5	Dismantling of R.C.C. concrete structures by mechanically using Jack hammer and cutting of steel bars including debris removing up to a lead of 50m etc complete as per the directions of Engineer in charge.	Cum		
109	250	Supplying and mixing steel fiber manufactured by Dramix of approved L/D ratio and dia.	Kg		
110	50	Preparing the surface and applying Nito bond coatings mixed with cement at the ratio 1 lit/Kg in each layers and applying for bonding the old and new concrete for walls, floors, columns, beams, slabs at all levels as per the direction of Engineer in charge.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
111	25	Supplying & laying of sloping screed and 50mmx50mm coving with SIKA (Sika Latex), FOSROC Nito bond SBR), BASF (Master Emaco 141). Polymer modified mortar (Cement: sand: 6mm aggregate 1:1.5:3 with a Water (Mixed with Sika Latex) cement ratio Of 0.4-0.45)to get a workable mix. The dosage of of Sika Latex will be 6 kgs per bag of cement. The thickness of the screed should be maintained to get a slope of 1 in 70 for the finished surface to facilitate draining of rain water etc., complete as per the manufacturer's specifications	Rm		
112	25	Supplying and applying two part flexible cementitious water proof coating brush bond 1.50 mm thick at a coverage of 12m2 / pack including necessary surface preparation etc., complete as per specifications	Sqm		
113	25	Providing polymer modified mortar of CM 1:4 of 30 mm in two coats ( each coat of 15mm thick) admixed with Nitobond SBR @ 6lts per bag of cement including applying a polymer based bonding agent Nitobond SBR @ 1:1:4 ratio on the plastered surface ( one part of Nito bond AR one part of water and four part of cement)- This is for the walls and floor	Sqm		



SI No	Qty	Description of work	Unit	Rate words Figures	Amount
114	25	<p>TECHNICAL SPECIFICATION / WORK METHODOLOGY FOR WATERPROOFING OF SUNKEN PORTIONS</p> <p>1. The Brick wall-Floor junctions and other construction joints to be cut open to a V-groove of size 25mm X 50mm and reinstated with BASF make - Rheomix 141 - SBR Polymeric modified Cement mortar (CM 1:4) at a dosage of 2 ltrs per cement bag.</p> <p>2. Necessary pipe chasings and outlets to be ear-marked and completed well before starting our waterproofing treatment.</p> <p>3. The Floor and wall surfaces to be cleaned thoroughly without any traces of dirt or laitance and applied with two coats of Masterseal 550 – two part acrylic modified cementitious polymer membrane coating to a thickness of 1mm, over the above prepared wall and floor surface as per the mixing, application and coverage recommendations of the manufacturer.</p> <p>4. The above coated floor and wall surface to be overlaid with a protective plastering in CM 1:4, 20mm thick, admixed with BASF make Rheomac 707 – Integral waterproofing compound @ 150ml per Cement bag.</p> <p>5. The Pipe outlet area to be provided with water-tight shuttering and filled with Non-shrink grout BASF make - Masterflow 918 as per the application procedures recommended by the manufacturer.</p>	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
115	15	<p>TECHNICAL SPECIFICATION / WORK METHODOLOGY FOR PU INJECTION GROUTING</p> <p>1. Holes of 10mm dia shall be drilled on the leakage/damp spot in the Ceiling of the R.C slab using a portable Electric drill and a non-return ball-valve packer shall be fixed in the holes.</p> <p>2. Supplying and injecting PU based foam injection grout MEYCO MP355 1K – through the above fixed packers using a High-pressure one component Resin Injection pump until point of refusal. In case dripping of resin is observed through the packer hole, then the same shall be temporarily plugged with Masterseal 505 – Instant plugging compound. Note: Whilst we recommend the simultaneous injection of Acrylate Resin Masterflex 810 to stabilize the leak zone, this additional process would involve the fixing of an additional packer alongside the one fixed as in (1) above and the Acrylate resin Masterflex 810 shall be grouted with the same pump but after 24 hours of injecting Meyco MP355 1K.</p>	Kg		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
116	50	<p>TECHNICAL SPECIFICATION / WORK METHODOLOGY FOR CEMENT BASED INJECTION GROUTING</p> <p>1. Holes of 18mm dia shall be drilled on the leakage/damp spot in the Ceiling of the R.C slab using a portable Electric drill and a PVC nozzle of suitable size shall be fixed in it.</p> <p>2. Injecting Cementitious Injection grout using Cement Slurry admixed with Flowcable 50 – Non-shrink grout additive @ 250gms per Cement bag, through the above fixed nozzle until point of refusal. The nozzle shall then be plugged with Masterseal 505 – Instant plugging compound.</p> <p>3. The nozzles can be removed the next day and the hole shall be plugged with Masterseal 505 – Instant plugging compound.</p>	Point		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
117	2.5	<p>TECHNICAL SPECIFICATION / WORK METHODOLOGY FOR MICRO-CONCRETE/ NON-SHRINK CONCRETE</p> <p>1. The affected concrete member shall be cleaned thoroughly by wire brush cleaning and washed with copious amount of water by high pressure water-jetting.</p> <p>2. Exposed reinforcement bars – if corroded shall be cleaned by manual wire-brush cleaning and applied with Concessive ZRi – Epoxy Zinc rich primer or NITO ZINC (fosroc) as per the Technical and application recommendations of the manufacturer and allowed to dry for at least 24 hours.</p> <p>3. Supplying and Applying Concessive 1414 / Nitobond EP – Epoxy based Bonding Agent over the above prepared Concrete using a stiff brush as per the Technical and Application recommendations of the manufacturer. 4. Supplying and Pouring Emaco S46T / Rendroc HB2 – Cementitious Non-shrink, Micro Concrete into the erected formwork, for a nominal thickness of 50mm and whilst the above Bonding agent is tacky, and as per the Technical and Application recommendations of the manufacturer. 5. The formwork/shuttering shall be removed the next day and cured by placing wet hessian bags over the treated member.</p>	Cum		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
118	5	Resurfacing of the substrate including pointing of pressed tiles etc with SIKA (Sika Latex) or FOSROC (Nitobond SBR) or BASF (Master Emaco 141) polymer modified mortar (Cement: sand ratio : 1:3 with a Water (Mixed with Sika Latex) cement ratio Of 0.4-0.45)to get a leveled substrate. The dosage of Sika Latex will be 6 kgs per bag of cement.	Sqm		
119	5	Cutting of crack in 'V' groove in 10 mm X10 mm & shall be sealed with Sikaflex 11 FC (polyurethane sealant) or FOSROC or BASF (Master Flex 472).	Rm		
120	5	Chipping of external and internal plaster as directed by the Engineer-in-charge and disposing the debris outside the building at the nearby ear-marked location as directed by the Engineer-in-charge.	Sqm		
121	5	Identifying and marking carefully the damaged reinforced concrete by tapping with light hammer and chipping the same with chisel after demarking till sound concrete is achieved and cleaned with compressed air including removal of debris including sand blasting the surface.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
122	5	Providing and applying the rust cleaner alkaline in nature by using SIKA (Sika®-rust off 100), FOSROC (Rebaklen RR), BASF (MBT rustkleen) to the existing/additional rebars including wire-brushing manually or by mechanical tools, clean etc. complete by running water. Measurement on the basis of area of concrete exposed for rust cleaning of reinforcement.	Sqm		
123	5	Providing and applying two coats of anti-rust zinc protective coating on rebars after cleaning of rust scales as per manufacturer's instructions. (Measurement on the basis of area of concrete exposed for application of anti-corrosive paint) SIKA (SikaTop®-Armatec-108), FOSROC (Nito zinc primer, Consumption: 3.75 kg/m2 for two coats), BASF (Master Emaco P130), etc complete	Sqm		
124	5	Providing bonding coat of Polymer latex over the exposed concrete in ratio 1:1 to 1:1.5 of Polymer and cement complete as directed by the Engineer-in-charge by using materials like SIKA (Sika® Latex modified cementitious bond coat, Consumption: 0.25 kg/m2 for one coat), FOSROC (Nitobond S B R ), BASF (Master Emaco 141), etc complete	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
125	5	Repairing the damaged concrete portion using single component thixotropic polymer modified mortar of thickness upto 25mm by using SIKA (SikaTop®-122 HS. Yield: 0.84 ltr/kg, compressive strength $\geq$ 50 N/mm <sup>2</sup> for 28 days according to ASTM C 109; flexural strength $\geq$ 3 N/mm <sup>2</sup> for 7 days according to ASTM C 293-79.), FOSROC (Renderoc RG, Compressive strength $\geq$ 50N/mm <sup>2</sup> for 28 days according to BS 4551-80; flexural strength $\geq$ 5N/mm <sup>2</sup> for 28days), BASF (Master Emaco S466) as per the manufacturer's recommendation and specification etc., complete	Sqm		
126	100	Providing and casting and repairing of excessively damaged members of repair thickness above 25mm with micro concrete at all levels with all leads and lift as directed by Engineer-in-charge, including mixing, laying, leveling, finishing including curing complete by using materials like SIKA (SikaRep® Microcrete-4 + adequate coarse aggregate. Yield: approx. 13.5 ltr/bag (25kg) depending on the size and quantity of coarse aggregate added, compressive strength > 50 N/mm <sup>2</sup> (28 days) according to ASTM C 1107-99), FOSROC renderoc RG (Renderoc RG, Compressive strength $\geq$ 50N/mm <sup>2</sup> for 28 days according to BS 4551-80), BASF (Master Emaco S466) as per the manufacturer's recommendation and specification etc., complete	Kg		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
127	13	Supply and apply a stitched, one directional, high strength CFRP fabric as per manufacturer specification like SIKA (Sika Wrap® 230C) Wrapping the fiber sheet to structural element at desired orientation using tamping roller to avoid any air voids etc., over the prepared surface (Grinding / moulding concrete substrate, cleaning it with wire brush removing oil, laitance if present, rounding sharp edges to min 25 mm radius and applying compatible primer on prepared substrate, Filling the holes and uneven surface with thixotropic epoxy based impregnating resin / adhesive for low density fabric for base and top coat (Sika dur® 33C) including sand pasting to rectify air voids if any paste the river sand on it to make surface rough totake any further finishes as per direction and satisfaction of Engineer-in-charge. (Manufacturer: SIKA (Sika wrap 230C), BASF ( Master brace FIB 230/200).	Sqm		
128	25	Hacking thoroughly the existing RC surface and providing and applying 25mm thick plaster in two coats in cement mortar 1:4. Cement mortar should be added with SIKA (Sika® Latex modified cementitious mortar. Yield: 0.02 ltr/kg of mortar (considering 10% polymer by weight of cement) Product requirements: styrene butadiene rubber emulsion; polymer content > 35%), FOSROC (Nitobond S B R @ 2 ltrs. per bag of cement including applying a polymer based bonding agent Nitobond S B R @ 1:1:4 ratio / or equivalent etc completed. SBR polymer 2.5% by weight of cement and addition of 100% PP fibers), BASF (Master Emaco 141) at the rate specified by the manufacturer	Sqm		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
129	25	Resurfacing of the substrate including pointing of pressed tiles etc with SIKA (Sika Latex) or FOSROC (Nitobond SBR) or BASF (Master Emaco 141) polymer modified mortar (Cement: sand ratio : 1:3 with a Water (Mixed with Sika Latex) cement ratio of 0.4-0.45) to get a leveled substrate. The dosage of Sika Latex will be 6 kgs per bag of cement.			
130	25	Supply and apply a vapour barrier with PE sheet of 0.3mm thick.	Sqm		
131	25	Supply & application of 50 mm thick insulation board, <b>Sikatherm XPS/ Fosroc/ BASF</b> to achieve required thermal insulation. Thermal conductivity of 0.028 W/m-K at 24 deg C as per ASTM C518, Compressive Strength of over 250 kPa as per ASTM D1621, tensile strength of over 300 kPa as per ASTM D1623 and has flammability of Class B2 as per DIN 4102, water absorption of less than 1% as per ASTM D284.	Sqm		
132	25	Supply and apply a polyester based geo textile protection fleece sarnafelt 300 from sika / FOSROC/ BASF or equivalent with the following specification of density $\geq 300$ g/m <sup>2</sup> ; thickness 2.4 mm; tensile strength $\geq 430$ N/50mm; elongation at break $\leq 100$ %; tear strength $\geq 250$ N; puncture resistance $\geq 1600$ N; cone drop: 13 mm.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
133	25	Terrace area : Supply and apply a 1.2 mm thick, twin colour, heat weld able, UV and weather resistant, polyester scrim reinforced, thermo plastic synthetic roofing membrane made of virgin plasticized polyvinylchloride (PVC-p) containing a transparent coating applied on the top surface to resist staining from airborne dirt particles and pollutants. Including complete installation using the loosely laid – mechanically fastened method as per manufacturer’s method statement including overlapping, seam welding, detailing, fasteners, washers, welding chord etc. Sarnafil® S 327-12L from SIKA or equivalent product from FOSROC and BASF with following specification of UV resistance Pass (>5000 h / grade 0) as per EN 1297.impact strength > 450 mm height (falling mass 0.5 kg) as per EN 12691; tensile strength > 1000 N/50mm; weather resistant; elongation at break≥10 % as per EN 12311-2, SRI of 104 as per ASTM E 1980-01	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
134	5	Vertical Wall: Supply and apply a 1.2 mm thick, twin colour, heat weld able, UV and weather resistant, fibre glass reinforced, thermo plastic synthetic roofing membrane made of virgin plasticized polyvinylchloride (PVC-p) containing a transparent coating applied on the top surface to resist staining from airborne dirt particles and pollutants. Including complete installation using the <u>fully adhered</u> method, with a Polyurethane (PU) based synthetic adhesive as per manufacturer's method statement including overlapping, seam welding, detailing etc. Sarnacol® adhesive from SIKA or equivalent product from FOSROC/ BASF and membrane Sarnafil® G 410-12L from SIKA or equivalent product from FOSROC / BASF with the following specification UV resistance Pass (>5000 h / grade 0) as per EN 1297.impact strength > 450 mm height (falling mass 0.5 kg) as per EN 12691; tensile strength > 8.5 N/mm <sup>2</sup> ; weather resistant; elongation at break≥180 % as per EN 12311-2, SRI of 106 as per ASTM E 1980-01	Sqm		
135	25	Providing and applying primer over the prepared surface with <b>Sika Concrete Primer Consumption: 0.10-0.20 kg/m<sup>2</sup> or FOSROC or equivalent product</b>	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
136	5	<p>Supply and apply Polyurethane roofing system having following key performance properties:</p> <ol style="list-style-type: none"> <li>1. Moisture Triggered chemistry (MTC) based Aliphatic single component Polyurethane system</li> <li>2. Fully reinforced with randomly weaved glass fiber matting bound together by special emulsifier (Reemat Premium).</li> <li>3. Roofing system should be completely seamless &amp; zero flame application.</li> <li>4. Dry film thickness should be 1.3 mm with Tensile load of 5 N / mm<sup>2</sup> &amp; elongation is of 150%.</li> <li>5. Polyurethane roofing system should be of high solid content approx. 80% by weight.</li> <li>6. The roofing system should be compatible with Bitumen.</li> </ol> <p>The installation company of roofing system should be trained and authorized by Manufacturer &amp; installation to be carried out as per manufacturer's approved method statement. All auxiliary &amp; accessories involved during application should be supplied by single manufacturer as a part of system. Any component used which is not manufactured by the roofing manufacturer can only be used with official approval from manufacturer.</p> <p>System: Base coat: Sikalastic®-618  Consumption base coat: 1.4 kg/m<sup>2</sup>.  Reinforcement: Sika® Reemat  Premium: Top coat: Sikalastic®-618  Consumption top coat: 1.0kg/m<sup>2</sup>.  or FOSROC or equivalent product</p>	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
137	25	Termination of applied coating with Termination & fixing with 4 nos SBF fastener (6.0x35 mm) per RM & sealing with <b>Sikaflex 11 FC or FOSROC or BASF (Master Flex 472)</b>	Rm		
138	25	Removing and re-fixing of MS grills for windows in paneling including necessary screws at all levels and etc complete as per the direction of Engineer in charge. (of size more than 2.00 sqm)	Sqm		
139	15	Labour charges for cutting, welding, alteration and re-fixing in position for existing weld mesh / grill with additional MS clamps welded to the existing frame supports including all materials, tools and plants, welding rods etc complete as per the direction of Engineer in charge.	Sqm		
140	13	Providing and fixing of 16mm dia / 205mm length Hilti Expansion Fastener including necessary drilling of beam concrete etc complete at all levels as per the direction of Engineer in charge.	No		
141	200	Removing of existing surplus earth, rubbish and garbage through the lorry/truck including loading, unloading and transporting to outside the IITM premises including approval from local authorities like municipality/corporation complete as per the direction of Engineer in charge.	Cum		
142	25	Providing, laying and joint welding of HDPE pipes 75mm dia heavy with necessary tools and tackles etc. complete as per the directions of Engineer-in-charge. (Finolex / Astral)	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
143	13	Providing and fixing of HDPE 75mm dia Tee / Bend / Flange with collar with fixing through welding the joints and etc. complete as per the direction of Engineer in charge. (Finolex / Astral)	No		
144	13	Providing and laying of 300mm dia heavy duty RCC Hume pipe as per Indian standards with collar joints and stilt mixture CM 1:2 etc. complete	Rm		
145	250	Powder coating of Aluminium grills of required colours as per the direction of Engineer-in-charge. (20 micron thickness)	Sqm		
146	25	Marking and providing of 20mm dia holes at 150mm depth by using heavy duty drilling machine to insert 16mm dia reinforcement rods and grouting of cement slurry for providing concrete walls including cleaning of holes by using Air compressor and etc complete as per the direction of Engineer in charge.	No		
147	13	Providing and fixing multi wall lexan compact poly carbonate sheet of 6mm thick over the truss work. The joints shall be treated with aluminium profile, rubber beadings and silicon sealants every joints with necessary screws including self-tapping screws for sheet fixing and etc complete as per the manufacturers specifications. The rate inclusive of labours material for jointing between each sheet etc complete at all levels.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
148	50	Providing and fixing of 32mm dia PVC pipe 50 kg/cm <sup>2</sup> with necessary couplings, solution and special clamps as per approved ISI make etc complete for AC outlet. The rate inclusive of labours, fittings, clamps, scaffolding and etc complete at all levels.	Rm		
149	50	Providing and fixing teak wood corner decorative beading of various sizes upto 40x40mm for door frames / wall paneling etc complete as per the direction of Engineer in charge.	Rm		
150	5	Providing and fixing box type cupboard of 400 mm thick with partly glazed and partly plywood sliding shutters made of all-round 19mm thick BWR plywood (Kitply / Century ply) and laminated with 1mm thick lamination sheet (Greenlam / Sunmica) for all exposed surfaces and using 6mm thick float glass (Saint Gobain / Modi float), 6mm thick BWR plywood (Kitply / Century ply) for sliding shutter / openable shutter with laminate plywood and inner surfaces finished with two coats of enamel paint	Sqm		
151	13	Providing and fixing of Notice Board using 19mm thick plywood all-round frame and fixing of mica lamination on all exposed surfaces and 12mm thick BWR waterproof ply (Kitply / Century ply) .	No		
152	75	Labour charges for removing the Vertical blinds carefully and Re-fixing the same including necessary screws etc complete as per the direction of Engineer in charge	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
153	13	Providing and fixing of 12mm thick Plain float glass for wall partition / table top with all-round edge polishing and design work as per approved design wherever necessary and etc. complete as per direction of Engineer-in-charge.	Sqm		
154	8	Supplying and fixing PVC foam (Rajshree) sheet for bath room doors with necessary base adhesive and etc. complete as per direction of Engineer-in-charge.	Sqm		
155	25	Preparing surface and applying BASF 1730 Master top water proofing Epoxy coating or equivalent as per manufacture specifications and etc complete as per the direction of Engineer in charge.	Sqm		
156	15	Providing and fixing of white colour writing board with 12mm thick waterproof BWR plywood (Kitply / Century ply) and over the surface white writing L lamination 1mm thick with all-round Aluminium L channels including necessary nails & screws and clamps etc. complete as per the direction of Engineer in charge.	Sqm		
157	25	Providing and fixing machine cut and machine polished yellow colour granite slab/ flame granite for staircase step and riser as required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) and etc complete as per the direction of Engineer-in-charge.	Sqm		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>158</b>		Providing and fixing aluminium tower bolts ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc complete (Classic, Crown, Jal)			
<b>a</b>	50	150 x 10 mm	Each		
<b>b</b>	50	200 x 10 mm	Each		
<b>c</b>	75	250x10mm	Each		
<b>d</b>	75	300x10mm	Each		
<b>159</b>		Providing and fixing special quality chromium plated brass cupboard locks with 6 levers including necessary screws etc. complete (best make of approved quality) of : (Godrej / Link)			
<b>a</b>	13	Size 40 mm	Each		
<b>b</b>	13	Size 50 mm	Each		
<b>c</b>	25	Size 65 mm	Each		
<b>160</b>	13	Providing and fixing door bottom with Paddak / Kongu country wood frame of size 25x40mm for the door bottom repair work. The rate is including cutting and making the frame. Including removing the door and fixing it to door bottom properly & fixing the door in position.	Each		
<b>161</b>		Providing and fixing aluminium sliding door bolts ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc complete (Classic, Crown, Jal)			

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>a</b>	50	250 x 16 mm	Each		
<b>b</b>	25	300x16mm	Each		
<b>162</b>	50	Making opening with existing window frame for fixing AC of various size including charges for additional wood ,painting, labour for cutting window grill, window frame, charges for fixing 6mm plywood for remaining portion of opening etc complete	Each		
<b>163</b>	50	Providing and fixing 4 lever mortice lock godrej / link including repair to the door etc., complete	Each		
<b>164</b>		Providing and fixing aluminium handles ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc complete (Classic, Crown, Jal)			
<b>a</b>	50	75 mm	Each		
<b>b</b>	100	100 mm	Each		
<b>c</b>	100	125 mm	Each		
<b>165</b>	50	Labour charges for cutting the windows and door frames to required height and altering the shutter to the required size and fixing in position etc., complete	Each		
<b>166</b>		Providing and fixing ISI marked M.S. pressed butt hinges bright finished with necessary screws etc complete : (Classic, Crown, Jal)			
<b>a</b>	5	75 x 47 x 1.70 mm	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>b</b>	5	100 x 58 x 1.90 mm	Each		
<b>c</b>	5	125 x 65 x 2.12 mm	Each		
<b>167</b>	125	Providing 40 x 5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm dia. Bolts, Nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Each		
<b>168</b>		Providing and fixing ISI : 12817 marked Stainless Steel Butt Hinges with Stainless Steel screws etc. complete (Godrej)			
<b>a</b>	25	100 x 58 x 1.90 mm	Each		
<b>b</b>	25	125 x 64 x 1.90 mm	Each		
<b>169</b>	25	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws complete :100 x 10 mm	Each		
<b>170</b>	5	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws etc. complete	Each		
<b>171</b>	25	Providing and fixing 4 mm thick BWR plywood plain lining with necessary screws, priming coat on exposed surface, etc. complete with Teak ply facing of approved manufacturer (Kitply / Century ply)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
172	5	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete 2nd Class teak wood 50x12mm	Meters		
173	5	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete 2nd Class teak wood 50x20mm	Meters		
174	5	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete Paddak / Kongu wood 50x12mm	Meters		
175		Providing and fixing ISI marked oxidized M.S. pressed parliamentary hinges with necessary screws etc complete			
a	5	75x100x20x2.24mm	Each		
b	75	100x125x22x2.80mm	Each		
c	8	125x125x22x2.80mm	Each		
176		Providing M.S. piano hinges ISI marked IS : 3818 finished with nickel plating and fixing with necessary screws etc complete :			
a	10	Overall width 35mm	Meters		
b	10	overall width 50mm	Meters		
177		Providing and fixing ISI marked oxidized M.S. tower bolt black finish (barrel type) with necessary screws etc complete :			
a	15	100x10mm	Each		
b	10	150x10mm	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>c</b>	15	200x10mm	Each		
<b>d</b>	15	250x10mm	Each		
<b>178</b>	10	Providing and fixing ISI marked 85 mm x 42 mm oxidized M.S. pull bolt lock confirming to IS :7534 with necessary screws, bolts, nuts and washers etc complete :	Each		
<b>179</b>		Providing and fixing ISI marked oxidized M.S. door latches confirming to IS : 5930 with necessary screws etc complete :			
<b>a</b>	10	300x20x6mm	Each		
<b>b</b>	13	250x20x6mm	Each		
<b>180</b>		Providing and fixing ISI marked oxidized M.S. handles confirming to IS : 4992 with necessary screws etc complete :			
<b>a</b>	13	75mm	Each		
<b>b</b>	13	100mm	Each		
<b>c</b>	13	125mm	Each		
<b>181</b>		Providing and fixing oxidized M.S. casement stays (straight peg type) with necessary screws etc complete :			
<b>a</b>	8	200mm weighing not less than 120grams	Each		
<b>b</b>	8	250mm weighing not less than 150grams	Each		
<b>c</b>	8	300mm weighing not less than 200grams	Each		
<b>182</b>		Providing and fixing bright finished brass door latch with necessary screws complete :			

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>a</b>	5	250x16x5mm	Each		
<b>b</b>	5	300x16x5mm	Each		
<b>183</b>		Providing and fixing special quality bright finished brass cupboard or wardrobe locks with 4 levers including necessary screws etc. complete (Godrej / Link)			
<b>a</b>	5	40mm	Each		
<b>b</b>	5	50mm	Each		
<b>184</b>		Providing and fixing bright finished brass handles with screws etc. complete: (Godrej / Link)			
<b>a</b>	5	75mm	Each		
<b>b</b>	5	100 mm	Each		
<b>c</b>	5	125mm	Each		
<b>185</b>	5	Providing and fixing bright finished brass furniture handles (Godrej / Link)	Each		
<b>186</b>	25	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, screws etc. to suit shutter thickness complete (Godrej / Link)	Each		
<b>187</b>	25	Providing and fixing IS 3564 marked Aluminum die cast body tubular type universal hydraulic door closer hardwyn make (classic queen) or equivalent with necessary accessories and screws etc complete	Each		
<b>188</b>		Providing and fixing bright finished brass hard drawn hooks and eyes (Everite)			

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>a</b>	18	100mm	Each		
<b>b</b>	18	150mm	Each		
<b>c</b>	18	200mm	Each		
<b>d</b>	18	250mm	Each		
<b>e</b>	18	300mm	Each		
<b>189</b>		Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete (Godrej)			
<b>a</b>	13	75x65x4mm(heavy type)	Each		
<b>b</b>	13	100x70x4mm(ordinary type)	Each		
<b>c</b>	13	125x70x4mm(ordinary type)	Each		
<b>190</b>	10	Providing and fixing 85 x 42 mm chromium plated brass pull bolt lock with necessary screws, nuts, bolts and washers etc. complete (Godrej)	Each		
<b>191</b>	10	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc complete.	Each		
<b>192</b>		Providing and fixing chromium plated brass handles with necessary screws etc. complete (Godrej)			
<b>a</b>	8	75mm	Each		
<b>b</b>	8	100mm	Each		
<b>c</b>	8	125 mm	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>193</b>		Providing and fixing aluminium butt hinges anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc complete (Classic, Crown, Jal)			
<b>a</b>	5	75x63x4mm	Each		
<b>b</b>	5	100x63x3.2mm	Each		
<b>c</b>	5	100x63x4mm	Each		
<b>d</b>	5	100x75x4mm	Each		
<b>e</b>	5	125x63x4mm	Each		
<b>f</b>	5	125x75x4mm	Each		
<b>194</b>		Providing and fixing aluminium hanging floor door stopper ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc complete (Godrej)			
<b>a</b>	25	Single rubber stopper	Each		
<b>b</b>	10	Twin rubber stopper	Each		
<b>195</b>	20	Providing and fixing aluminium casement stays ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc complete	Each		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
196	25	Renewing bottom rail and / or top runner of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand	Kgs		
197	50	Repairing and re-fixing the existing window / door shutters by replacing the damaged style, rails etc and making into serviceable condition for all types of windows, doors the rate only for labour charge, necessary additional payment for the materials like wood and fittings will be paid separately	Each		
198	10	Providing and fixing Aluminium Sheet 1mm thick for Toilet flush door with necessary screws, nails and etc. complete	Sqm		
199	10	Providing and fixing of 4mm thick Veneer on table top surface and side with Teak decorative beading all-round including Melamine polish.(Greenlam / Sunmica)	Sqm		
200	500	Removing and stacking of existing wooden partition, false ceiling and cupboard carefully loading, unloading, transporting within IIT premises.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
201	25	Providing and fixing rear wall acoustic insulation make a grid of size 2'x2' using 50x40mm ven teak wood reaper and fix the same on the wall. And cut 24kg/cum density, 50mm thick fiberglass resin bonded wool and fix the same into all the gaps between wooden reapers and above covering insulation with semi-perforated hard board and Novapan board at required height including putty and etc. complete.	Sqm		
202	25	Providing and fixing Galvanized wire mesh of average width of aperture 1.4mm and nominal dia of wire 0.63mm to window and ventilator including country wood reapers of size 2"x1" and painting neatly and repair works etc. complete.	Sqm		
203		Renewing glass panes and re-fixing existing wooden fillets			
a	75	Float glass panes weighing 10kg/Sqm 4mm	Sqm		
b	200	Float glass panes weighing 13.75kg/Sqm 5.5	Sqm		
204	8	Providing and fixing special quality bright finished brass cupboards or wardrobe locks with levers including necessary screws etc., complete (best make of approved quality) (Godrej / Link)	Each		
205	100	Providing and fixing Aluminium flush door stopper of anodic coating of grade Ac 10 as per IS 1868 - transparent or dyed to require colour at shade with neat screws etc 3-1/2" size 80mm of good quality material as directed including removing the existing damaged floor stopper.	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
206	350	Labour charges for dressing the butting edges of unfitted door / window / ventilator shutters and replacing the same in good condition and make it to open and close freely including removing the worn out hinges by replacing / re-fixing new hinges wherever required.	Each		
207		Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position :			
a	2.5	Second class teak wood	Cum		
b	5	Paddak / Kongu wood	Cum		
208	75	Providing and fixing 19mm thick BWR commercial plywood for cupboard shutters door etc. with necessary 25mm x 4mm thick teak beadings, screws, nails etc as per the direction of Engineer in charge.(Kitply / Century ply)	Sqm		
209	50	Providing and fixing the Sunmica/laminated sheet 1mm thick for cupboard shutter & cupboard work including cost of fevicol, labour charges for fixing including providing teak wood beading of 38x12mm all-round etc complete as directed.	Sqm		
210		Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets			
a	5	20 mm dia ( Heavy Type )	Rm		
b	5	25 mm dia. ( Heavy Type )	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
211	50	Providing and fixing MS round or square bars at required spacing in wooden frames of windows and clerestory windows	Kgs		
212	50	Providing and fixing hard drawn steel wire fabric 75 x 25 mm mesh of weight not less than 7.75 kg per sqm to windows frames, etc. including 62 x 19 mm beading of second class teak wood and painting neatly etc. complete	Sqm		
213	10	Providing and fixing fly proof galvanized M.S. wire gauze to windows and clerestory windows using galvanized M.S. wire gauge with average width of aperture 1.4 mm in both directions with wire of diameter 0.63 mm with 2nd class teak wood beading 62 x 19 mm	Sqm		
214	10	Providing and fixing 4mm thick BWR commercial plywood for plain lining with necessary screws & priming coat on exposed surface etc., complete. (Kitply / Century ply)	Sqm		
215		Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including ISI marked black enameled M.S. butt hinges with necessary screws excluding paneling which will be paid for separately. Second class teak wood			
a	5	35mm thick	Sqm		
b	10	30mm thick	Sqm		
c	10	Padak wood - 30 mm tk Shutters	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>216</b>		Providing and fixing paneling or paneling and glazing in paneled or paneled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Paneling for paneled or paneled and glazed shutters 25mm to 40mm thick Second class teak wood			
<b>a</b>	10	Second class teak wood	Sqm		
<b>b</b>	10	Padak wood	Sqm		
217	25	Extra for providing frosted glass panes 10 kgs /sqm (4mm thick) instead of ordinary glass panes 10 kgs / sqm (4mm thick) in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured)	Sqm		
<b>218</b>		Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I ) (like Novapan, Ecoboard etc.,) or graded wood particle board (like Bhutan board) IS:3087 marked to frame, backing or studding with screws, etc. Complete (Frames, backing or studding to be paid separately)			
<b>a</b>	50	12mm thick	Sqm		
<b>b</b>	50	18mm thick	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>219</b>		Providing and fixing pre-laminated flat pressed 3 layer (medium density) particle board (like Novapan, Ecoboard etc.) or graded wood particle board (like Bhutan board) IS:3087 marked with one side decorative and other side balancing lamination Grade I, Type II exterior grade confirming to IS:12823 marked in shelves with screws and M.S or Aluminium brackets wherever required, edges to be painted with Polyurethane Primer (Brackets to be paid separately) 18mm thick			
<b>a</b>	50	25 mm thick	Sqm		
<b>b</b>	50	18mm thick	Sqm		
<b>220</b>		Providing and fixing ISI marked flush door shutters decorative type, core of block board construction with frame of First class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.30mm thick including ISI marked Stainless steel butt hinges with necessary screws.(Shakthi / Kutty / Western India)			
<b>a</b>	25	Decorative type	Sqm		
<b>b</b>	25	Non decorative type	Sqm		
<b>221</b>	50	Extra for providing lipping with second class teak wood battens 25mm minimum depth on all edges of shutters ( Overall area of door shutter to be measured)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
222	13	Extra for providing vision panel not exceeding 0.1 sqm in all types of flush doors (Cost of Glass excluded). (Overall Area of door shutter to be measured) rectangular or square	Sqm		
223	125	Providing and fixing MS round o square bars with MS flats at required spacing in wooden frames of windows and clerestory windows	Kgs		
224	1250	Providing and fixing M.S. grills of required pattern in frames of windows, etc. with M.S. flats, square or round bars etc. all complete Fixed to openings / wooden frames with rawl plugs, screws, etc.	Kgs		
225	10	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws complete (best make of approved quality) (Godrej)	Each		
226	2000	Providing and fixing colour anodized aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular and other sections of approved make confirming to IS : 733 and IS : 1285, . (Glazing and paneling to be paid for separately.) for fixed portion (JINDAL / INDAL)	Kgs		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
227	750	For shutters of doors, windows and ventilators including providing and fixing hinges / pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required. Including Fittings or approved make as per the instruction of Engineer-in-charge.	Kgs		
228	250	Supplying and fixing aluminium ornamental grill of size 50 x50 x 7.5mm thick to the aluminium frames. The rate includes fabrication, cutting, erecting and material etc, complete. Material for making frame for fixing the grill will be paid separately.	Sqm		
229	75	Supplying and fixing sun control film (Garware /Grey - 5) for aluminium sliding window including cleaning the glasses neatly after fixing the film and edges to be cut properly	Sqm		
230	25	Providing and fixing openable cupboard with shutter using first quality Paddak / Kongu wood size 75mm x40mm frame and shutter using 19mm commercial plywood and 1mm thick sunmica and finished with two coats of enamel paint over a priming coat and including hardware fittings and labour charge etc., complete.	Sqm		
231	5	Providing and fixing of PVC moulded Box type Mirror with screws and etc. complete	Nos		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
232	5	Providing and fixing ISI marked steel glazed doors, windows and ventilators of standard rolled steel sections, joints mitred and welded with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20mm nominal size).	Kgs		
233	50	Providing and fixing of Brass coated Curtain Rings with Brass Hooks and removing & relaying curtain cloth etc. complete	Sqm		
234	25	Providing and fixing of Hydraulic floor Spring for doors with approved make and etc. complete including cutting neatly finishing of floors (Hardwyn / Everite)	Each		
235	5	Providing and fixing of 5mm thick Modi float/ Saint Gobain make Mirror and 6mm thick water proof plywood (Kitply / Century ply) on back side with all-round Decorative teak wood beadings of size 35x35mm, with two coat of french polish etc. complete	Sqm		
236	13	Providing and fixing of Brass Cylindrical Lock of Godrej make with necessary screws and bolts etc. complete.	Nos		
237	5	Providing and fixing brass bright finished fantasy aldrop for main door. The rates include labour charges etc complete.	Nos		
238	25	Supplying and fixing 1mm thick laminated sheet of approved make and ISI marked as per the instruction of engineer-in-charge.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
239	50	Providing and fixing 12mm thick Water proof plywood for plain lining with necessary screws & priming coat on exposed surface etc., complete. (Kitply /Century ply)	Sqm		
240	2	(White board)-Providing and fixing with 1mm thick white laminated sheet over 18mm thick waterproof plywood backing with TW beading 11/2"x11/2" all round with melamine polishing including labour charges etc complete. (7'0" X 3'0")	Each		
241	25	Providing and fixing of decorative Teak wood cornice work of size 35x25mm in skirting including all materials and labour charges etc. complete as per direction of Engineer in charge.	Rm		
242	15	Providing and fixing of 1200 x 1200mm size perforated particle board with necessary nails including labour charges for removing of existing damaged tiles & disposing the same as per the directions of Engineer-in-charge.	Sqm		
243	8	Providing and fixing of decorative Teak wood beading for wall paneling of size 20mm x 6m including polishing etc. complete as per direction of Engineer in charge.	Rm		
244	10	Providing and fixing Aluminium stays with necessary bolt, nut, screws etc complete as per the direction of Engineer in charge. (300mm long)	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
245	10	Providing and fixing fly proof Stainless steel wire mesh (1.4mm size aperture) to windows, ventilators and doors with necessary all-round teak wood beading and etc complete as per direction of Engineer in charge.	Sqm		
246	25	Charges for fixing of Notice board, book shelves, name boards including providing necessary clamps and screws, nails by using drilling machine for making holes and wooden plugs etc complete as per the directions of Engineer in charge.	No		
247	5	Providing, making and fixing of Paddak / Kongu wood frame with closing of 19mm BWR plywood (Kitply / Century ply) and making exhaust fan holes in 300mm dia and fixing of S.S. fly proof mesh with nails, fevicol and etc complete as per the directions of Engineer in charge.	No		
248	10	Providing and fixing bright finished Brass Hinges 150 mm with Brass screws etc. complete as per the direction of Engineer in charge.(Godrej)	Nos		
249	15	Providing and fixing of approved make Pivot set for aluminium doors and necessary screws etc complete as per direction of Engineer in charge.	No		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
250	25	Providing and fixing wall paneling of 2"x1 1/2" country wood frame @ 600mm c/c in both directions and covered 8mm thick waterproof BWR plywood (Kitply / Century ply) for paneling including primer for plywood and wooden frame etc complete as per the directions of Engineer in charge.	Sqm		
251	80	Providing and fixing of grid beam type gypsum board false ceiling 12mm thick with necessary GI channel frame work as per the manufacture specifications and joints neatly finishing and two coat painting with emulsion paint etc. complete as per the direction of Engineer in charge.	Sqm		
252	3	Providing, making and fixing box type wall cupboard with openable shutter made up of 19mm thick BWR plywood (Century ply / Kitply) including necessary compartments in Horizontal and vertical, the exposed surfaces finished with 1mm thick lamination sheet (Greenlam / Sunmica)	Sqm		
253	5	Removing the existing glass writing board and replacing the same in the position wherever damaged portion repainting etc as per the direction of Engineer in charge. (7'0" X 3'0")	No		
254	10	Providing and fixing curtain pipe of 25mm dia Stainless steel pipes including Brass decorative bracket sets at each end including necessary screws etc complete as per the direction of Engineer in charge.	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
255	15	Providing and fixing Sliding wheel for Aluminium sliding door etc complete as per the direction of Engineer in charge.	No		
256	15	Providing and fixing of 2" dia heavy type Rolling wheel for movable partition with brass screws and etc complete as per the direction of Engineer in charge.	No		
257	13	Providing and fixing mirror of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing Rectangular shape 453 x 357 mm	Each		
258	13	Providing and fixing brass bib cock of approved quality conforming to IS:8931 (Metro / Parryware) 15mm nominal bore	Each		
259		Providing and fixing CP brass shower rose with 15 or 20 mm inlet (Metro / Parryware)			
a	10	150mm diameter	Each		
b	10	100mm diameter	Each		
260	15	Providing and fixing solid plastic seat with lid for pedestal type WC Pan Parryware / Hindware / Seabird / Orient (Coral) complete White solid plastic seat with lid	Each		
261		Providing and fixing PVC waste pipe for sink or wash basin including PVC waste fittings complete			
261.1		Semi rigid pipe			

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>a</b>	25	32 mm dia	Each		
<b>b</b>	12	40 mm dia	Each		
<b>261.2</b>		Flexible pipe			
<b>a</b>	25	32 mm dia	Each		
<b>b</b>	12	40 mm dia	Each		
<b>262</b>	5	Providing and fixing brass gate valve with CI wheel of approved quality (Screw ended) horizon (Leader / Audco) 25mm nominal bore	Each		
<b>263</b>	12	Providing and Fixing 20mm brass gate valve (Horizon / Leader / Audco make) with necessary arrangements.	Each		
<b>264</b>	13	Providing and fixing low level flushing cistern with manually controlled device (handle lever) confirming to IS : 7231, Parryware / Hindware / Seabird / Orient (Coral) with all fittings and fixtures complete 10 lt. capacity - white	Each		
<b>265</b>	5	Providing and fixing 100 mm sand cast iron grating for gully, floor or nahani trap	Each		
<b>266</b>	100	Labour charges for removing the rusted/broken GI pipe and replacing with new pipes/re-fixing after removing blockages including cutting, threading, connecting, painting the pipes fixing wooden plugs and clamps etc., complete for internal distribution of water lines of dia 15mm to 25mm	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
267	30	Providing and fixing un-plasticized PVC connection pipe brass unions (Kohinoor) 45 cm length 15mm nominal bore	Each		
268	25	Providing and fixing PVC heavy duty nahini trap of dia 150mm	Each		
269		Providing and fixing wash basin with CI / MS brackets, 15mm CP brass pillar taps, Kingston / Gem / Techno / Parko, 32mm CP brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls and floors where ever necessary. (Hindware / Parryware)			
a	12	White Vitreous China Flat back wash basin size 550 x 400 mm with a single 15mm CP brass pillar taps	Each		
b	10	White Vitreous China Flat back wash basin size 450 x 300 mm with a single 15mm CP brass pillar taps	Each		
270	10	Providing and fixing white vitreous china pedestal type (European type / Wash down type) water closet pan. (Hindware / Parryware)	Each		
271	10	Providing and fixing white vitreous china water closet squatting pan (Indian type) Orissa pattern WC Pan of size 580 x 440 mm. (Hindware / Parryware)	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>272</b>		Providing, Laying and jointing glazed stone ware pipes grade A with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete			
<b>a</b>	75	100mm dia	Rm		
<b>b</b>	75	150mm dia	Rm		
<b>273</b>		Providing and fixing square mouth SW gully trap grade A complete with CI grating brick masonry chamber with water tight CI cover with frame of 300x300mm size with weight of 7.20kg/Sqcm - with sewer bricks			
<b>a</b>	10	100x100mm size P type	Each		
<b>b</b>	10	150x100 mm size P Type	Each		
<b>274</b>		Providing and fixing GI pipes complete with GI fittings and clamps including cutting and making good the walls etc. (Internal work) Exposed on wall. (Tata / Apollo)			
<b>a</b>	12	15 mm dia nominal bore	Rm		
<b>b</b>	100	20 mm dia nominal bore	Rm		
<b>c</b>	150	25 mm dia nominal bore	Rm		
<b>d</b>	12	32 mm dia nominal bore	Rm		
<b>e</b>	13	40 mm dia nominal bore	Rm		
<b>f</b>	50	50 mm dia nominal bore	Rm		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>275</b>		Providing and fixing GI pipes complete with GI fittings and clamps including trenching and refilling etc. External work. (TATA / APPOLO)			
<b>a</b>	30	15 mm dia nominal bore	Rm		
<b>b</b>	35	20 mm dia nominal bore	Rm		
<b>c</b>	150	25 mm dia nominal bore	Rm		
<b>d</b>	25	32 mm dia nominal bore	Rm		
<b>e</b>	20	40 mm dia nominal bore	Rm		
<b>f</b>	25	50 mm dia nominal bore	Rm		
<b>276</b>		Providing and fixing Concealed pipe complete with GI fittings and clamps including painting with anti-corrosive bitumastic paint, cutting chases and making good the wall			
<b>a</b>	50	15mm dia nominal bore	Rm		
<b>b</b>	50	20 mm dia nominal bore	Rm		
<b>277</b>		Providing and fixing GI union in GI pipes including cutting and threading the pipe and making long screws etc., complete. ('R' brand / Unique)			
<b>a</b>	9	15mm nominal bore	Each		
<b>b</b>	10	20mm nominal bore	Each		
<b>c</b>	11	25mm nominal bore	Each		
<b>d</b>	9	32 mm dia nominal bore	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
e	10	40 mm dia nominal bore	Each		
f	11	50 mm dia nominal bore	Each		
278	25	Labour charges for fixing washer/spindle to bib cocks/pillar cocks etc.,	Each		
279	20	Taking out C.I. Cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work and stacking of useful materials near the site and disposal of unserviceable materials within 50 m. lead	Each		
280	12	Providing and fixing vitreous China, toilet paper holder	Each		
281	3	Making connection of GI distribution branch with GI Main of following sizes by providing and fixing Tee, including cutting and threading the pipe etc. complete 25 to 40 mm nominal bore	Each		
282	5	Constructing masonry chamber 90 x 90 x 100 cm, inside with 100 class designation flyash concrete block brick work in cement mortar 1:5 (1 cement : 5 fine sand) for sluice valve, with C.I surface box 100 mm top diameter, 160mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick finished with a floating coat of neat cement complete as per standard design with flyash concrete blocks class designation 100	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
283	5	Constructing masonry chamber 60 x 45 x 50 cm, inside with 100 class designation flyash concrete block work in cement mortar 1:5 (1 cement : 5 fine sand) for water meter complete with C.I double flap surface box 400 x 200 x 200 mm (inside) with locking arrangement and RCC top slab 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) With flyash concrete block of class designation 100	Each		
284	50	Providing and fixing C.P brass angle valve for basin mixer and geyser points of approved quality conforming to IS: 8931. (Metro / Parryware)15mm nominal bore	Each		
285	10	Supplying and fixing CI cover 300 x 300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5 kg (Neco)	Each		
286	10	Making connection of drain or sewer line with existing manhole including breaking into and make good the walls, floors with cement concrete 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with Cement mortar 1 :3 etc – complete. For pipes 100 to 250 mm diameter	Each		
287	11	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (raising depth of manhole to be paid separately) Rectangular manhole 120 x 90 cm with circular cover 500mm dia of grade MD - 10	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
288	11	Supplying and fixing CP brass long body bib cock of Jaguar make or equivalent approved by the Engineer-in-Charge of 20mm dia nominal bore etc complete.	Each		
289	10	Supplying and fixing CP brass bib cock of Jaguar make or equivalent approved by the Engineer-in-Charge of 15mm dia nominal bore etc complete.	Each		
290	5	Supplying and fixing CP wall mixer of Jaguar make or equivalent approved by the Engineer-in-Charge of 15mm dia nominal bore etc complete.	Each		
291	5	Providing and fixing Salem stainless steel sink with drain board (Diamond make REK4020 medium bowl of size 40" x 20" and 1mm thick with necessary fittings etc complete.	Each		
292	10	Providing & fixing 15mm dia CP brass metro 2 in 1 tap (Tap with angle valve) of approved brand and specification with CP extension nipple of required length, CP flange and making good the walls	Each		
293	5	Providing and fixing Salem stainless steel A ISI 304 (18/8) kitchen sink as per IS 13983(without drain board) with CI brackets and stainless steel plug 40mm including painting the fittings cutting and making good the walls wherever required 610x510mm bowl depth 200mm. (Diamond / Butterfly)	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
294	5	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangements of approved quality colour and make (Prayag or equivalent) 600 mm long towel rail with total length of 645 mm, 78mm wide and effective height of 88mm, weighing not less than 190gms.	Each		
295	6	Supplying and fixing CP towel rail of size 200x600mm long including fixing in position etc complete	Each		
296		Providing and fixing White Vitreous China laboratory sink with CI brackets, CP brass chain with rubber plug, 40mm CP brass waste and 40mm CP brass trap with necessary CP brass unions complete, including painting of fittings and brackets, cutting and making good the walls where ever required. (Parryware / Hindware)			
a	9	size 450x300x150mm	Each		
b	10	size 600x450x200mm	Each		
297	10	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings : Flat back wash basin of size 550 x 400 mm (Parryware / Hindware)	Each		
298	5	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings. Size 450 x 300 x 150 mm (Parryware / Hindware)	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
299	7	Providing and fixing 600 x 450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with CP brass screws and washers complete (Saint Gobain / Modifloat)	Each		
300	5	Providing and fixing PTMT 15 mm Urinal spreader size 95 x 69 x 100 mm with 1/2" BSP thread and shape as per BIS specification, weighing not less than 60 gms (Prayag or equivalent)	Each		
301		Providing and fixing brass gate valve with CI wheel of approved quality (Screw ended) (Leader / Audco / Horizon)			
a	11	25mm nominal bore	Each		
b	10	32mm nominal bore	Each		
c	9	40mm nominal bore	Each		
d	3	50mm nominal bore	Each		
302	5	Constructing masonry chamber 60 x 60 x 75 cm, inside with 75 class designation brick work in cement mortar 1:5 (1 cement : 5 fine sand) for sluice valve, with C.I surface box 100 mm top diameter, 160mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	Each		
303		Painting G.I pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work. (Asian / ICI / Berger)			
a	30	15 mm dia nominal bore	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>b</b>	40	20 mm dia nominal bore	Rm		
<b>c</b>	35	25 mm dia nominal bore	Rm		
<b>d</b>	25	32 mm dia nominal bore	Rm		
<b>e</b>	20	40 mm dia nominal bore	Rm		
<b>f</b>	25	50 mm dia nominal bore	Rm		
<b>304</b>		Repainting G.I pipes and fittings with synthetic enamel white paint of approved quality (Asian / ICI / Berger)			
<b>a</b>	30	15 mm dia nominal bore	Rm		
<b>b</b>	40	20 mm dia nominal bore	Rm		
<b>c</b>	35	25 mm dia nominal bore	Rm		
<b>d</b>	30	32 mm dia nominal bore	Rm		
<b>e</b>	25	40 mm dia nominal bore	Rm		
<b>f</b>	20	50 mm dia nominal bore	Rm		
<b>305</b>		Providing and fixing G.I Union in existing G.I pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required. ('R' brand / Unique)			
<b>a</b>	11	15 mm dia nominal bore	Each		
<b>b</b>	12	20 mm dia nominal bore	Each		
<b>c</b>	13	25 mm dia nominal bore	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
306	12	Providing and fixing C.P brass bib cock of approved quality conforming to IS: 8931 (Metro / Parryware)	Each		
307	10	Providing and fixing C.P brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms (Metro / Parryware)	Each		
308	13	Providing and fixing C.P brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms (Metro / Parryware)	Each		
309		Providing and fixing PTMT (An Engineering thermoplastic) bib cock of approved quality colour and make (Prayag or equivalent)			
a	5	15mm nominal size, 86 mm long, 102mm high and 43mm wide with 12mm seat dia and replaceable Washers, weighing not less than 90 gms	Each		
b	5	15mm nominal size, 122 mm long, 110mm high and 43mm wide with 12mm seat dia and replaceable washers, weighing not less than 105 gms	Each		
310	5	Providing and fixing PTMT (An Engineering thermoplastic) pillar cock of approved quality colour and make (Prayag or equivalent)15mm nominal size, 107 mm long, 131mm high and 43mm wide with 12mm seat dia and replaceable washers, weighing not less than 120 gms	Each		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
311	5	Providing and fixing PTMT (An Engineering thermoplastic) push cock of approved quality colour and make (Prayag or equivalent) 15mm nominal size, with 12 mm BSP female threads, 80mm long, 30mm high and 30mm wide with 12mm seat dia and replaceable washers, weighing not less than 47 gms	Each		
312		Providing and fixing PTMT (An Engineering thermoplastic) grating of approved quality, colour and make (Prayag or equivalent)			
a	20	100mm nominal dia 12mm high, domed shape conforming to IS standards and weighing not less than 25 gms Circular type	Each		
b	25	150mm nominal size square, 18mm high with 100mm dia. Of the inner hinged round grating domed shape conforming to IS standards, weighing not less than 100gms. Rectangular type with openable lid	Each		
313	3	Providing and fixing PTMT angle stop cock 15 mm nominal size with deluxe handles, 59 mm wide, 125 mm high and 42 mm breadth with 12 mm seat dia. And replaceable washers, weighing not less than 90 gms. Provided with flange of 56 mm dia. of approved quality, colour and make (Prayag or equivalent)	Each		
314	4	Providing and fixing PTMT Flange 15 mm size, 56 mm dia. suitable for 15 mm taps and weighing not less than 5 gms. (Prayag or equivalent)	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>315</b>		Providing & Fixing PTMT Extension Nipple for water tank pipe, fittings of approved quality, color & make (Prayag or equivalent)			
<b>a</b>	6	Providing and fixing PTMT extension Nipples 15 mm size with 12" BSP threads, 70 mm length and 30 mm breadth and weighing not less than 18 gms. (Prayag or equivalent)	Each		
<b>b</b>	5	- do- but 25mm nominal size, with dimensions 69x43x43 mm weighing not less than 45gms	Each		
<b>c</b>	5	- do - but 25mm nominal size, with dimensions 69x43x43mm weighing not less than 65gms	Each		
<b>316</b>		Providing, Laying cement concrete 1:5:10 (1 cement: 5 coarse sand: 10 graded stone aggregate 40mm nominal size) all-round Stoneware pipes including bed concrete as per standard design:			
<b>a</b>	5	100mm dia SW pipe	Rm		
<b>b</b>	5	150mm dia SW pipe	Rm		
<b>317</b>		Dismantling of old Stoneware pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50m lead and disposal of unserviceable materials into municipal dumps.			
<b>a</b>	5	100mm dia SW pipe	Rm		
<b>b</b>	5	150mm dia SW pipe	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>318</b>		Supplying and fixing CI cover without frame for manholes:			
<b>a</b>	5	455 x 610 mm rectangular CI cover (light duty) the weight of the cover to be not less than 23 kg	Each		
<b>b</b>	5	500 mm diameter CI cover (medium duty) the weight of the cover to be not less than 58 kg	Each		
<b>c</b>	5	560 mm diameter CI cover (heavy duty) the weight of the cover to be not less than 108 kg	Each		
<b>319</b>		Providing and fixing in position pre cast R.C.C. Manhole cover and frame of required shape and approved quality			
<b>a</b>	5	Rectangular shape 600 x 450 mm internal dimensions	Each		
<b>b</b>	5	Square shape 450 mm internal dimensions	Each		
<b>320</b>	5	Providing and fixing of CP Head in Metro/Jaquar make for pillar cock, Bib cock and angle cock etc. complete	Nos		
<b>321</b>	13	Providing and fixing of CP Health Faucet in Metro make including all necessary fittings etc. complete	Nos		
<b>322</b>	13	Providing and fixing of 40mm thick CP Brass waste Couplings for approved make and etc. complete	Nos		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
323	13	Providing and fixing of 20mm dia CP Brass Lab Tap three way in Metro / Equivalent approved make including necessary fittings etc. complete	Nos		
324	15	Providing and fixing of CP Brass Metro make Bottle Trap with flange and etc complete	Nos		
325	15	Providing and fixing of Metro / Equivalent CP brass urinal spreader including necessary screws and 'M' Seal filling etc complete as per direction of Engineer-in charge	Nos		
326	8	Providing and fixing of 20mm dia CP Brass Swan neck Tap in Metro / Equivalent approved make including necessary fittings etc. complete	Nos		
327	6	Providing and fixing of Super Deluxe Metro make 15mm dia CP brass Pillar cock with necessary flange and etc. complete as per direction of Engineer - In - charge	Nos		
328	5	Providing and fixing of Liquid soap container with necessary Screws and etc. complete as per direction of Engineer-in-charge (Metro / Parryware)	Nos		
329	5	Providing and fixing of CP Brass Towel Ring Metro make with CP Brass Screws and etc. complete as per direction of Engineer-in-charge	Nos		
330	25	Providing and laying of 80mm dia 'B' class medium GI Pipe Tata / Apollo or approved make with necessary GI ISI fittings etc. complete as per specification	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
331	5	Providing and fixing of CP Brass Soap dish with CP Brass Screws and etc. complete as per direction of Engineer-in-charge. (Metro / Parryware)	Nos		
332	5	Supplying and fixing of Porcelain Ceramic 120mm thick Urinal Partition size 820 x 380 with SS Clamp etc. complete (Hindware / Parryware)	Nos		
333	10	Providing and fixing of PVC pipe 160mm / 6 kgcm2 with necessary couplings, solution and special clamp as per approved make Prince / Finolex or Equivalent ISI Make etc. complete	Rm		
334	5	Providing and fixing White vitreous china flat back half stall urinal of 580x380x350mm with white PVC automatic flushing cistern, Parryware / Hindware / Seabird / Orient(Coral) with fittings, standard size CP brass flush pipe, spreaders with unions and clamps	Nos		
335	6	Providing and fixing Indian Standard SFRC cover with frame of size 600x600mm including finishing etc all complete	Nos		
336	5	Providing and fixing Indian Standard SFRC cover with frame of size 300x300mm including finishing etc all complete	Nos		
337	10	Providing and fixing automated spreader for urinals (Parryware Retrofit AC model).	Nos		
338	20	Labour charges for removing broken defective flushing cistern and replacing and re-fixing after repairing with brackets fittings etc complete. For low level flushing cistern 10 litre capacity. (Parryware / Hindware)	Each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
339	50	Labour charges for replacing the worn out fittings like bibcock angle cock / gate valve and pillar cock etc with necessary spindles and washers complete.	Each		
340	25	Labour charges for dismantling and removing the broken / hanging wash hand basin of any size & replacing re-fixing the wash hand basin in position including plumbing works replacing the wooden plug etc. complete.	Each		
341	250	Labour charges for removing the rusted / broken GI pipe and replacing with new pipes / re-fixing after removing blockages including cutting, threading, connecting, painting the pipes fixing wooden plugs and clamps etc : For internal distribution of water lines of 15mm to 25mm.	Rm		
342	25	Providing and fixing of 100mm dia C.P. grating with white cement packing all-round, the grating for floor sump and etc. complete. (Parryware / Metro)	Each		
343	5	Providing and fixing PTMT shower rose of 100mm diameter with 15mm dia inlet shower arm etc complete as per the direction of Engineer in charge. (Prayag)	Set		
344	5	Providing and fixing of 20mm dia Metro or equivalent make C.P. concealed super deluxe stop cock and etc. complete.	No		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
345	25	Removing the existing 110mm dia PVC pipe line and re-fixing the same for rain water pipe including necessary cutting and fixing etc complete as per the direction of engineer in charge.(Supreme / Prince / Finolex )	Rm		
346	8	Providing and fixing of UPVC pipe 40mm dia / 6kg with necessary couplings, solution and special clamp as per approved make Prince / Finolex or Equivalent ISI Make etc. complete.	Rm		
347		Providing and fixing of CPVC pipe with necessary couplings, solution and special clamp as per approved make Prince / Finolex or Equivalent ISI Make etc. complete.			
a	30	15 mm dia nominal bore	Rm		
b	50	20 mm dia nominal bore	Rm		
c	35	25 mm dia nominal bore	Rm		
d	50	32 mm dia nominal bore	Rm		
e	25	40 mm dia nominal bore	Rm		
f	20	50 mm dia nominal bore	Rm		
348	25	Labour charges for dismantling and removing the existing water closet including debris cleaning upto lead of 50m lead.	No		
349	6	Supplying and fixing water free urinal with all fittings Parryware of approved model CO 577 with necessary accessories.	Nos		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
<b>350</b>		Distemping with oil Bound washable / dry distemper of approved brand and manufacture to give an even shade in all floors. (Old work). ( Asian / ICI / Berger)			
<b>a</b>	300	One or more coats.	Sqm		
<b>b</b>	375	Two or more coats.	Sqm		
<b>351</b>	250	Finishing walls with water proofing cement paint of approved brand and manufacture and required shade to given an even shade in all floors (old work). ( Snowcem plus / Durocem) One or more coats including priming coat.	Sqm		
<b>352</b>	500	Finishing walls with water proofing cement paint of required shade- Old work One or more coats.	Sqm		
<b>353</b>		Painting with synthetic enamel paint of approved brand and manufacture to give an even shade in all floors for wood/steel work. 1st quality. ( Asian / ICI / Berger)			
<b>a</b>	500	One or more coats.	Sqm		
<b>b</b>	1500	Two or more coats.	Sqm		
<b>354</b>	500	Wall painting with 100% Acrylic Interior emulsion paint of approved brand and manufacture to give an even shade in all floors (old work) one or more coat. ( Asian / ICI / Berger)	Sqm		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
355	2500	Removing the existing wall finishing in interior faces such as white washing/Oil Bound distempering/plastic Emulsion paint etc., by thoroughly scrapping, sand papering, cleaning washing and preparing the surface smooth including necessary repairs to scratches cleaning etc., complete	Sqm		
356	250	Prepare surface and re - polishing the old wooden surface using approved quality & make french polish/varnish including bees waxing wood filler etc., and such other required materials, one or more coat to give an even shade. (Sheenlac or Equivalent)	Sqm		
357	1000	Applying super premium quality 100% Exterior Acrylic (Asian / ICI /Berger) emulsion over dry surface after removal of all loose or defective paint or powdery residue by through brushing and scrapping, using a stiff wire or fibre brush followed by water jetting if required. Treat surface affected by mould, lichens algae and moss with 1% solution of surface treatment chemical (STC).	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
358	6000	Applying super premium quality 100% interior Acrylic emulsion paint (ICI /Asian / Berger) over dry surface after removal of all loose or defective paint or powdery residue by through brushing and scrapping, using a stiff wire or fibre brush followed by water jetting if required. Fill up minor cracks and defect with cement and sand mixture for larger holes and cracks, allow to dry. Surface that remain powdery, firable or chalku after through preparation should be sealed with a coat of acrylic paint thinned (1:1) do not apply any kind of primer or Putty.	Sqm		
359	250	Polishing on wood work with readymade wax polish mirror finish with approved brand and manufacture	Sqm		
360	10	Floor painting with enamel paint of approved brand and manufacture of required colour to give an even shade :one or more coats on old work (ICI /Asian / Berger)	Sqm		
361	150	Melamine polishing with spray (one or more coats including a coat of wood filler and sealant) with finishing neat etc. complete. (MRF or Equivalent)	Sqm		
362	1000	Applying one coat of cement primer of approved brand and manufacture on wall surface etc. complete. (JK white / Birla white)	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
363	750	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade in all floors for wood/steel work. (Two or more coats over and including a coat of suitable primer) (ICI /Asian / Berger)	Sqm		
364	25	Providing and fixing wall paneling 6mm thick waterproof ply over 4mm thick URO veneer ply wood of approved ISI equivalent make including frame 2"x1 1/2" country wood frame for opening portion including 150mm high skirting with 12mmwater proof ply wood Kitply and URO deodar wood design beading for skirting edges and finished by melamine spray polishing of matt finish with necessary Fevicol screws hardware items spray by finished etc complete (Greenlam / Sunmica)	Sqm		
365	25	Providing and fixing of wooden partition in full height by using of first quality Paddak / Kongu wood in sizes of 1 3/4" x 2 1/4" frame work @2ft grid in horizontal and vertical direction and two sides covered by 12mm ply thick water proof BWR ply ISI marked (Kitply / Century ply) with 4mm thick veneer / OST fixing melamine polishing etc complete. The rate includes cost of material, labour, hardware and all miscellaneous expenditure etc	Sqm		
366	25	Providing and fixing plywood 4mm thick , one side decorative veneer for plain lining / cladding including priming coat on unexposed surface, decorative veneer facings of approved manufacture.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
367	15	Providing and fixing full height wooden partition with country wood frame (first quality Paddak / Kongu) work 3"x2" & 3"x1 1/2" @ 600mm/c in two directions having 6mm BWR plywood of approved make (Kitply / Century ply) on both sides finished with 1mm mica with necessary fevicol, Screws and etc complete as per the directions of Engineer in charge.	Sqm		
368	13	Providing and fixing 4mm thick OST/ ISI marked sheet ( Greenlam / Sunmica) on wooden partition, and doors as approved shade, including fevicol, screw, scaffolding work and melamine polishing with necessary sealant and fillers at all levels etc complete.	Sqm		
369	15	Providing and fixing low/semi height wooden partition with country ( first class Paddak / Kongu ) wood frame work of size 3"x2" and 600mm c/c in two directions having 6mm thick ISI plywood of approved make on both sides including 1mm thick lamination sheet (Greenlam / Sunmica) finishing and top finish with 4"x3/4" teak wood cornice reaper with necessary fevicol,	Sqm		
370	50	Providing and fixing of water proof 6mm thick BWR Plywood ISI marked (Kitply / Century ply) for window / wooden partition paneling wherever required and etc. complete as per the direction of Engineer in charge.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
371	200	Providing and fixing of aluminium powder coated (20 micron) ornamental grill for window using 2"x1 1/2" Aluminum frame with heavy duty aluminum U channel with all-round of grill portion of size 100x100x7mm thick including labour and material and also making good the disturbed wall etc	Sqm		
372	50	Dismantling existing aluminum partition with door and re-fixing the same at different location as per the direction of the engineer in charge. The rate includes labour charge for additional alteration and repairs, replacing the damaged parts wherever required etc.	Sqm		
373	15	Providing and fixing sliding type cupboard with all-round frame using country wood (Paddak / Kongu) of size 70 x 30 mm, and 6mm thick commercial ply wood ISI marked and finished with 1mm thick laminated sheet of approved make and shades as directed by engineer in charge. The rate includes all fittings like aluminum two track sliding arrangement, aluminum powder coated handle, hinges, magnetic catcher, sliding wheel as approved by the engineer in charge and labour charge etc.,	Sqm		
374	25	Providing and fixing sliding type cupboard shutters with all-round frame of size 65x30mm thick Paddak / Kongu wood frame, two track aluminum sliding rail, finished with 5.5mm thick plain glass of approved make SAINT GOBIN or MODIFLOAT the rate includes labour charge, material like handle, lock, sliding wheel and necessary fittings etc.,(including polishing the wooden frame ) as per the direction of the engineer in charge	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
375	20	Labour charge for repairing the aluminum door /window by removing and replacing the damaged section, beading, fittings and making the good the disturbed portion etc., The rate excluding the cost of fitting and aluminum section and glass panes but including cost of PVC / neoprene gasket etc,	Sqm		
376	30	Supplying and fixing of absorptive type Acoustical tiles of size 600mm x 1200mm x 12mm thick (Density 600 Kg/cm) as approved by Architect/ Engineer -in charge, fixed over G.I framework of 48mm x 25mm x 0.8mm 'C' studs @ 600mm x 600mm C/C spacing complete. The gap between the tile and wall surface shall be filled with 50 mm thick SoundSynth AW wool which are friction fitted and adhered using Sound Stick S7. The tiles are then fixed to Aluminium frame using seam fasteners etc. Complete as directed by Engineer in charge. The NRC Value of the Wall panel	Sqm		
377	40	Providing and fixing Wall Paneling with 48mm x 25mm x 0.8mm 'C' G.I studs, vertical member placed 610mm interval and horizontal supports at 1200 mm levels with 8mm thick BISON PANEL (Cement Bonded Particle Board confirming to IS : 14276) and 1.00mm thick mica etc of approved colour etc. complete. maintain 25mm air gap between the wall and panel.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
378	100	Supplying and fixing of bison panel boards of 10mm thick panel of size 8' x4' as approved by Architect/ Engineer -in charge, fixed over G.I framework of 48mm x 35mm x 0.8mm or 75mmx 35x 0.8mm lip'C' studs @ 610mm Vertical x 1200mm Horizontal spacing or equivalent aluminium sections 65x35mm with 1.5mm thick. The gap between the boards shall be filled with 25mm thick SoundSynth AW wool. The tiles are to fixed to Aluminium frame using seam fasteners etc. The surface should be finished with 1mm thick mica of appropriate shade or acrylic interior paint using necessary adhesive, nails etc complete as directed by Engineer in charge.	Sqm		
379	25	Bison partition of thickness 100mm thick Supplying and fixing of bison panel boards of 10mm thick panel of size 8' x4' as approved by Architect/ Engineer -in charge, fixed over G.I stud framework of required size or frame with aluminium sections 100x40 sections' studs @ 610mm Vertical x 1200mm Horizontal spacing . The gap between the boards shall be filled with 50mm thick SoundSynth AW wool. The tiles are to be fixed to Aluminium frame using seam fasteners etc. The surface should be finished with 1mm thick mica of appropriate shade by using necessary adhesive, nails etc complete as directed by Engineer in charge.	Sqm		
380	200	Providing and applying cement based putty M/s Birla or equivalent of upto2 mm thickness over plastered surface to prepare the surface even and smooth etc complete	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
381	15	Supplying and fixing Daiken HDF laminate floorings 1210x193x8.3mm of size fixed on floors by tongue and groove joints after placing one layer of fiber wool. The rate inclusive of labour for laying, hire charges for tools and plants and other overheads etc complete.	Sqm		
382	150	Supply and fixing of aluminium Awning with U4 panels of 84mm wide 16mm deep and 0.05mm to 0.56mm thick special aluminium alloy. The aluminium panels shall be coated with aliphatic polyurethane paint (MRF) on both sides, after giving a coating of etching primer to protect the paint from ULTRA VIOLET RAYS, Panel carriers shall be 79mm wide and 48 mm deep. 0.5 thick steel carriers, and cut to standard size of 3 mtrs. Carrier shall be powder coated, MS Angle with enamel brush painting - 35 mm x 3 mm Angle with 10 mm expansion bolt. (Rate inclusive of VAT 12.5%, gutter charges and delivery charges)	Sqm		
383	25	SS-Hand rail -Supplying and fixing Salem Stainless Steel or equivalent work of grade AC315 welded in built up sections / frame work for handrails including fixing with necessary foundation bolts etc. Vertical pipe with 20mm dia @ 1.2m c/c and end span with 50mm dia pipe, two numbers of horizontal pipe with 15mm dia at middle and 50mm dia pipe at top.	RM		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
384	250	Add extra for providing spacers of 3mm thick for laying ceramic tile flooring and grouting the joints with cerafil (Epoxy germ proof joint grout)or equivalent bonding agents instead of ordinary pointing for the tile various size with joints width of 3mm.	Sqm		
385	50	<p>Method statement for killing plants / tree grown-up on building - rate inclusive of removing dry tree, patch plastering and making good to the existing wall. (Scaffolding if required -charges towards same will be paid separately) Step 1: preparation of Chemical solution</p> <p>a. Take 1ltr of clean water</p> <p>b. Add 15ml herbicide "Roundup " (Glyphosate 41% S.L)</p> <p>c. Add 2 tea spoons of Ammonium sulphate to get good absorption</p> <p>d. Add 50ml of soap oil as a sticking agent</p> <p>e. Mix the above solution thoroughly in plastic container (not in iron/stainless steel, since the chemical may react with it)</p> <p>f. Fill the solution in a spray machine</p> <p>Step 2: Applying the chemical solution</p> <p>a. Spray the chemical solution over the leaves and stems of tree / plant</p> <p>b. After one week time, apply one more time if tree / plant is alive or remove the dead tree / plant.</p>	Plant		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
386	50	Hire charges for providing temporary barricading using GI corrugated sheet to a height of 3m. The GI corrugated sheets of 0.4mm thick shall be fixed to the framework made out MS pipe frame work as per the direction of Engineer-in-charge.	Sqm		
387	25	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	Sqm		
388	25	Laying old cement concrete interlocking paver blocks of any design/shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost).	Sqm		
389	25	Providing and fixing 12mm thick fire proof bison board for partitions, doors, etc as fixed panel	Sqm		
390	25	Providing and fixing 50mm thick fibre glass with 24 KG / cum resin bonded wool for partition	Sqm		
391	2	Providing and fixing DORMA floor spring(heavy duty) with special accessories for aluminium or glazed door etc.,	Nos		
392	13	Supplying and fixing frost rated etching film for partition glasses from 3m make	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
393	25	Supplying and fixing HDPE black color sheet of 400 microns thick	Sqm		
394	75	Supplying and applying of one part of water proof MIX PRIME AC (FAB Chemicals) the terrace coverage 4sqm / 1 litre including necessary surface preparation etc. complete.	Sqm		
395	75	Supplying and applying of one part of water proof MIX GUARD HR (FAB Chemicals) the terrace coverage 2sqm / 1 litre including necessary surface preparation etc. complete.	Sqm		
396	13	Providing and fixing 75mm thick Gypsteel® metal Stud <b>Duraline</b> partition which includes one layer of tapered edge 13mm thick Gyproc® Dura line ( <b>confirming to BS 1230 Type 5</b> ) is screw fixed with drywall screws of 25mm at 300mm centres to either side of 48mm Gypsteel® studs (0.60mm thick having one flange of 34mm and another flange of 36mm made of GI Steel) placed at 610mm centre to centre in 50mm Gypsteel® floor and ceiling channel (0.55mm thick have equal flanges of 32mm made of GI steel) with joints staggered to avoid leakage through joints. with the horizontal joints of the two boards. Finally square and tapered edges of the boards are to be jointed and finished so as to have a flush look which includes filling and finishing with Jointing compound, Joint Paper tape as per recommended practices of manufacturer like <b>Saint- Gobain India Gypsum or equivalent</b> Providing one coat of Primer one coat of Altek Patti with two coats of emulsion paint ( Asian / ICI / Berger)	sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
397	5	Providing and laying false ceiling with Ecophon HYGIENE Meditec E with 15 mm primed regular edge ,demountable tile , with the option of weekly wet cleaning and manufactured from High density glass wool ,with the visible surface has a reinforced Akutex T coating that should withstand the use of disinfecting chemicals and the back of the tile should be covered with glass tissue . The glass wool core of the tiles should be tested and classified as noncombustible according to EN ISO 1182. The system should have Sound Absorption NRC value of 0.9(according to EN ISO 11654). Tiles should withstand a permanent ambient RH up to 95% at 30 * C without sagging, warping or delaminating (ISO 4611). The light reflectance of the tiles should not be less than 84 %	Sqm		
398	50	Grouting the tile joints with Laticrete products- Applying Latapoxy SP100 (Grouting of tiles to be done with MYKL Laticrete Latapoxy Sp100 stain free grout as per the methodology specified in the technical data sheet of MYKL. 3mm width grout to be provided between tiles to fill the joints. 1 Unit = 5 Kgs. Coverage: 5.10 Sq.mt.. per Unit ) in the tile joints. The rate inclusive of surface preparation, labour, material, tools and plants etc complete. Rate inclusive of materials, labour charges at all levels.	Sqm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
399	13	Polishing of Kota stone flooring/ marble flooring/ mosaic flooring etc by grinding and honing of floor using diamond abrasives to remove all minor scratches to bring an even surface. Later hardening the surface with floor polishing powders. The floor will be burnished with 1200 RPM burnishes.	Sqm		
400	75	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete. Upto 5mm depth and 5 mm width	Rm		
401	8	Providing Mechanical core cutting up to 300mm depth 75 to 150mm dia for fixing pipes air cleaning for cutting holes removing of debris and labour charges etc., complete	Each		
402	2	Providing and fixing 12mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc for fixing required door fittings all complete as per direction of Engineer in charge .	Sqm		
403	50	Supplying SBR latex manufactured by M/s Fosroc / BASF/ SIKA.	litre		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
404	50	Deduct for removed old bib cock, pillar cock, stop cock, etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed.	Each		
405	50	Deduct for removed and Two way taps, long body bib cock etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed.	Each		
406	13	Deduct for removed of old wall mixture etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed.	Each		
407	75	Deduct for removed old rusted GI pipes of the following dia etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 15mm dia.	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
408	75	Deduct for removed old rusted GI pipes of the following dia etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 20 mm dia	Rm		
409	100	Deduct for removed old rusted GI pipes of the following dia etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 25mm dia.	Rm		
410	25	Deduct for removed old rusted GI pipes of the following dia etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 32mm dia.	Rm		
411	25	Deduct for removed old rusted GI pipes of the following dia etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 40mm dia.	Rm		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
412	25	Deduct for removed old rusted GI pipes of the following dia etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 50mm dia.	Rm		
413	150	Deduct for removed old flush tanks. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed.	Each		
414	125	Deduct for removed PVC pipes. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 75mm dia.	Rm		
415	50	Deduct for removed PVC pipes. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 110mm dia.	Rm		
416	38	Deduct for removed old seat cover. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed.	Each		



SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
417	25	Deduct for removed old Gate valve etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 20mm / 15mm dia.	Each		
418	15	Deduct for removed old Gate valve etc. Taken away from IIT campus as directed by Engineer in charge. (These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 25mm / 32mm dia.	Each		
419	75	Deduct for removed old angle cock etc. Taken away from IIT campus as directed by Engineer in charge. These item to be deducted for the replacement of new items and obtaining gate pass from the Engineer in charge as directed. 15mm dia.	Each		
420	25	Deduct the cost of damaged flush door shutter removed will be permitted to taken by the contractor by making payment to the Institute as directed. The items will consists of with or without frame including furniture fittings available in the door shutter. this items will be permitted to taken by the contractor as per the direction by the engineer in charge area up to 3.00 sqm	each		

SI No	Qty	Description of work	Unit	Rate Rs in words & Figures	Amount
421	25	Deduct the cost of damaged paneled or Glazed door / window shutter is removed while replacement .The paneled shutter will be permitted to taken by the contractor with / without frame inclusive of furniture fittings as per the directed by the Engineer in Charge by making payment to the Institute for an area up to 3.00 sqm	each		
422	50	Deduct cost of old aluminum section	kg		

**Total Amount (Rs. in words)** -----

**Signature of the Contractor**

**Executive Engineer (Civil)**