



INDIAN INSTITUTE OF TECHNOLOGY MADRAS

ENGINEERING UNIT

CHENNAI – 600 036

Tender No: 51 / 2012 – 13 / Civil.

Name of work	Construction of new building to accommodate clean room no 4 in the quadrangle of ESB.
Approximate Value put to Tender (for reference only)	Rs. 40.57 Lakhs.
Earnest Money Deposit	Rs. 82000/-.
Cost of Tender Schedule	Rs. 500.00
Vat @ 5%	Rs. 25.00
	Rs. 525.00
Last date and Time of Receipt	Date 04 - 09 - 2012 Time 3.00 PM.
Date and Time of Opening	Date 04 - 09 - 2012 Time 3.10 PM.

Certified that the tender document contains **32 (Thirty Two pages)** only and no alterations and additions have been made by me / us in the tender document.

Signature of the Contractor

Executive Engineer (Civil)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT
CHENNAI – 600 036

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Certified that the tender document contains 32 (Thirty Two pages) only and no alterations and additions have been made by me / us in the tender document.

Signature of the Contractor

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS
CHENNAI – 600 036**

TENDER NOTICE NO.:- 51 / 2012 - 13

Sealed item rate Tenders are invited by the Executive Engineer (Civil), Indian Institute of Technology Madras, Chennai – 600 036, from the **Registered Contractors of IIT Madras (Civil – Class: I to III)** in item rate agreement form up to 3-00 P.M on **04- 09- 2012** for the work of **“Construction of new building to accommodate clean room no 4 in the quadrangle of ESB.”**

Approximate value of items put to tender is **Rs. 40.57 Lakhs**. This is only for general guidance. The Tender can be downloaded from the IIT Madras web site (<http://tenders.iitm.ac.in>)

Tenders should be accompanied by two crossed Demand Drafts drawn in favour of IITM Chennai - 600 036 for **Rs. 82000/- towards Earnest Money Deposit and Rs. 525/- (Non – Refundable) towards cost of tender schedule**. Tenders received without Earnest Money Deposit and cost of tender schedule will be summarily rejected.

Completed Tenders received at Office of Executive Engineer (Civil) in time and will be opened after 3.10 P.M on **04- 09 - 2012** in the presence of Tenderers or their authorized agents.

Executive Engineer (Civil)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT
CHENNAI – 600 036

Item Rate Tender & Contract for Works

A) Tender for the work of : **“Construction of new building to accommodate clean room no 4 in the quadrangle of ESB.”**

(i) To be submitted by _____ hours on _____
to _____

(ii) To be opened in presence of tenderers who may be present at _____ hours
on _____ in the office of _____

T E N D E R

I / We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special Conditions, Schedule of Rates & other documents and rules referred to in the conditions of contract and all other contents in the tender document for the work.

I / We hereby tender for the execution of the work specified for the IIT within the time specified in Schedule 'F', viz., and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for **Ninety (90) days** from the due date of submission thereof and not to make any modifications in its terms and conditions.

A sum of **Rs. 82000 /-** has been deposited in cash / receipt treasury challan / deposit at call receipt of a scheduled bank / fixed deposit receipt of a scheduled bank / demand draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail to commence work as specified, I/we agree that IITM or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the 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 tender form.

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

Date _____

Signature of Contractor

Postal Address

Witness:
Address:
Occupation:

A C C E P T A N C E

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the President of India 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 President of India

Signature _____

Designation _____

Date _____

General Rules and Directions

1. The tender must be signed by the person / persons competent to sign as indicated in Technical bid. Same stipulations will also apply in the case of Receipt for payments made on account of work to the successful Contractor who has signed the Contract Agreement.
2. This form will state the work to be carried out, as well the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit to be deposited by the successful tenderer and the percentage, if any to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identifications by the officer inviting tender, shall also be open for inspection by the contractor at the office of officer the inviting tender, during office hours.
3. Any person who submits a tender shall fill up the form, stating at what item rate & amount he is willing to undertake the full work. Only one rate shall be given in words & figures for each item. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other condition of any sort including conditional rebates, will be summarily rejected. Tender shall have the name and number of the work to which they refer, written on the envelopes. Amount must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.
4. The officer inviting tender or his duly authorized assistant will open Financial Bids of those Tenderers whose, Technical Bids have been found acceptable, in the presence, of any intending Contractors or their authorized agents who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the Earnest Money forwarded therewith shall thereupon be given to the Contractor. 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.
5. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
6. The memorandum of work tendered for and the schedule of materials to be supplied by the institute and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is published. If a form is published to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
7. 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.
8. 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. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. 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. 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.

9. 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 tendered is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
10. All rates shall be quoted on the tender form. The amount for each item should be worked out and the requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs' should be written before the figure of 'Rupees' and the work ' P ' after the decimal figures, eg.' Rs 2.15P' and in case of words, the word, "Rupees" should precede and the work '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.
11. a. The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (five percent) of the tendered amount within specified period. This guarantee shall be in the form of Government Securities or fixed deposit receipt of any scheduled bank, guarantee bonds of any scheduled bank or state bank of India.

b. The contractor whose tender is accepted will be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5 % of the tendered value of the work. The Security deposit will be collected by deductions from the running bill of the contractor at the rates mentioned above and the earnest money if deposited in cash at the time of tender will be treated as a part of this Security Deposit. The SD amount will also be accepted in cash or in the shape of Government securities. Fixed deposit receipt of a scheduled bank or State bank of India will also be accepted for this purpose. Provided confirmatory advice is enclosed.

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.
12. Sales-tax (VAT), service tax, purchase tax, turnover tax, Service tax, works contract tax or any other tax on material, labour and works in respect of this contract shall be payable by the contractor and IITM will not entertain any claim whatsoever in respect of the same.
13. The Contractor shall give a list of both gazetted and non-gazetted IITM employees related to him.
14. 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.
15. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time. If he fails to do so, his failure will be a breach of the contract and the Executive Engineer (Civil) may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability on account of any violation by him of the provisions of the said Act.

Signature of Contractor

Executive Engineer (Civil)

CONDITIONS OF CONTRACT

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the IIT and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless context otherwise requires, have the meanings, hereby respectively assigned to them:-
 - i) 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.
 - ii) 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.
 - iii) 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.
 - iv) The Engineer-in-charge means the Engineer officer 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.
 - v) Accepting Authority shall mean the authority mentioned in Schedule 'F'.
 - vi) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of IITM, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by IITM of the part of the works in respect of which a certificate of completion has been issued or a caused solely due to IITM faulty design of works.
 - vii) 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.
 - viii) 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 is schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.
 - ix) Department means IITM which invites tenders.
 - x) District specification means the specifications followed by the state of Tamil Nadu in the area where the work is to be executed.
 - xi) Tendered value means the value of the entire work as stipulated in the letter of award.

3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.
4. Headings and marginal notes to these General Conditions of contract shall not be deemed to form part thereof be taken into consideration in the interpretation or construction thereof or of the contract.
5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specification, 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 his contract.
6. The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipments and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of quantities (Schedule-A) shall, unless otherwise states, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.
7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of Quantities, which rates and prices shall except as otherwise provided cover all his obligation under the contract and all matters and things necessary for the proper completion and maintenance of the works.
8. The several documents forming the contact are to be taken as mutually explanatory of one another, detailed drawings being following in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General conditions.
 - 8.1 In the case of discrepancy between the schedule of Quantities, the specifications and/or the Drawings, the following order of preference shall be observed.
 - i) Description of Schedule of Quantities.
 - ii) Particular Specification and special condition, if any
 - iii) Drawings.
 - iv) C.P.W.D Specifications
 - v) Indian Standard specifications of B.I.S.
 - 8.2 If these are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the documents and his decision shall be final and binding on the contractor.
 - 8.3 Any error in description, quantity or rate in schedule of Quantities or any omission there from shall not vitiate the contractor 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.
9. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall within 15 days from the stipulated date of start of the work sign the contract consisting of:-

- i) The notice inviting tender, all 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.
- ii) Standard C.P.W.D Form as mentioned in Schedule 'F' consisting of:-
 - a) Various standard clauses with corrections upto the date stipulated in schedule 'F' along with annexure thereto.
 - b) C.P.W.D Safety code.
 - c) Model Rules for the protection of health, sanitary arrangements for workers employed by CPWD of its contractors.
 - d) CPWD contractor's Labour Regulations.
 - e) List of Acts omissions for which fines can be imposed.

ADDITIONAL SPECIFICATIONS

The additional specifications given below are not substitute to CPWD specifications or IS specifications. These shall be read along with CPWD specifications or IS specifications.

GENERAL

1. The work shall be carried out using metric dimensions only and shall be measured and paid in metric dimensions. F.P.S. units, if any, mentioned in drawings etc are for guidance only.
2. Wherever any reference to any Indian Standard Specification occurs in the documents relating to this contract the same shall be inclusive of all amendments issued there to or revision there of if any, up to the date of receipt of tenders.
3. Unless otherwise specified in the schedule of quantities the rates for the various items are for all heights and locations.
4. Unless otherwise specified in the schedule of quantities the rate for the items of the work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payments will be made. This will include water encountered from any source, such as rains, floods, sub-soil water table being high or due to any other cause whatsoever.
5. The tender shall study the item description, the relevant drawings and satisfy himself the item of work to be carried

Executive Engineer (Civil)

PROFORMA OF SCHEDULE

SCHEDULE – ‘A’

The Bill of Quantities enclosed separately along with Tender (Financial bid)

SCHEDULE – ‘B’

NO MATERIAL SHALL BE ISSUED TO THE CONTRACTOR BY IITM.

SCHEDULE – ‘C’

Schedule of tools and plants proposed to be hired to the contractor.

NO TOOLS AND PLANTS SHALL BE HIRED TO THE CONTRATOR.

SCHEDULE – ‘D’

Extra schedules for specific requirements / documents for the work, if any.

1. No labour shall be permitted to stay in the campus
2. All debris obtained from dismantling the existing structure should be removed from site of work before start of work.

SCHEDULE – ‘E’

Schedule of component of cement, steel other materials, labour etc for price escalation.

CLAUSE – 10 CC

Clause 10 CC of General Conditions of Contract is not applicable to this work.

SCHEDULE – ‘F’

Reference to General conditions of contract

Name of work	: “Construction of new building to accommodate clean room no 4 in the quadrangle of ESB.”
Estimated cost or work	: Rs. 40.57 Lakhs.
i) Earnest Money Deposit	: Rs. 82000/-.
ii) Security Deposit	: 5% of tendered value. (Inclusive of EMD)
iii) Performance Guarantee	: 5% of 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

2 (v)	Engineer in charge	Executive Engineer (Civil).
2 (viii)	Accepting authority	Director, IIT Madras.
2 (x)	Percentage on cost of material and labour to cover all overheads and profits.	15%.
2 (xi)	Standard schedule of rates	CPWD DSR 2012.
2 (xii)	Department	IIT Madras.
9 (ii)	Standard CPWD contract form	CPWD 8 as modified and Corrected up to till date.

Clause 1

1.	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance in days.	7 (Seven)_Days
2.	Maximum allowable extension beyond the period provided above	7 (Seven) Days.

Clause 2

Authority for fixing compensation under clause 2. Executive Engineer (Civil).

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 date of start 14 Days.

Time allowed for execution of work **5 Months**

Authority to give fair and reasonable Extension of work for completion of work Executive Engineer (Civil)
IITM

Clause 7

Gross work to be done together with net payment/ adjustment of advances for material collected, if any, since the last such payments for being eligible to interim payment. **10 Lakhs**

Clause 10 CC

Clause 10 CC is not applicable to this work

Clause 11

Specification to be followed for execution of work Particular specifications
CPWD Specifications
IS codes
Manufacturer's specifications
General engineering practice

Clause 12.2 & 12.3

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for this work 30%

Clause 12.5

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work 100%

Clause 16

Competent Authority for Deciding reduced rates. Executive Engineer (Civil) IITM

Clause 36(i)

Designation	Minimum qualification and experience required	Discipline	Rate of recovery per month
Technical Representatives	Graduate (fresh candidate) or Diploma Engineer with 5 years experience - 1 No.	Civil Engineering	Rs. 15,000/-

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers

Clause 42

- i) (a) Schedule for determining theoretical quantity of cement DSR 2012 Published by CPWD
- ii) Variations permissible on theoretical quantities
- a) Cement
- i) to be brought by contractor 3% minus
- b) Steel
- i) To be brought by contractor 2% minus

For material to be brought by contractor

In case of less consumption than the above, necessary recovery shall be made as per rates given below.

However for over consumption no additional payment shall be made.

Recovery rates for quantities beyond permissible variation

For material to be brought by contractor

SI No	Description of item	Rates in figures and words at which recovery shall be made from the contractor's	
		Excess beyond permissible variation	Less use beyond the permissible variation
1	Cement	No extra payment or deduction shall be made	Market rate at the time of execution of work plus 10% as decided by the Engineer in Charge
2	Steel reinforcement	No extra payment or deduction shall be made	Market rate at the time of execution of work plus 10% as decided by the Engineer in Charge

**CLAUSES OF CONTRACT
ADDENDA & CORRIGENDA (A & C)**

Settlement of Disputes & Arbitration

Except where otherwise provided in the contract all question and disputes relating to the meaning of the specifications, designs, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders of these conditions or otherwise concerning the works or the execution or failure to executes the same whether arising during the progress of work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned herein after.

i) If the Contractor considers any work demanded of him to be outside the requirements of the contract, or disputed any drawings, record or decision given in writing by the Engineer-in-charge or any matter in connection with or arising out of the Contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Executive Engineer (Civil) in writing for written instruction or decision. Thereupon, the Executive Engineer (Civil) shall give his written instructions or decisions within a period of one month from the receipt of the contractor's letter.

If the Executive Engineer (Civil) fails to give his instructions or decisions in writing within the aforesaid period or if the Contractor is dissatisfied with the instructions or decision of the Executive Engineer (Civil), the Contractor may, within 15 days of the receipt of Executive Engineer (Civil)'s decision appeal to the Chairman (Engineering Unit), IITM who shall afford an opportunity to the Contractor to be heard, if the mater so desires and to offer evidence in support of his appeal. The Chairman (Engineering Unit), IITM shall give his decision within 30 days of receipt of Contractor's appeal.

ii) If the Contractor is dissatisfied with the decision of the Chairman (Engineering Unit), the Contractor shall within a period of 15 days of the receipt of the Chairman's decision appeal to the Director , IITM who shall afford an opportunity to the Contractor to be heard, if the mater so desires and to offer evidence in support of his appeal. The Director, IITM shall give his decision within 30 days of receipt of Contractor's appeal.

iii) If the contractor is dissatisfied with the decision of the Director IITM, he shall, with in 30 days of the receipt of the decision shall give notice to the Director IITM for appointment of an arbitrator to adjudicate his claims, failing which the said decision of the Director, IITM shall be final and binding on the contractor.

iv) Except where the decision has become final, binding and conclusive in terms of Sub para (iii) above, disputes or difference shall be referred for adjudication through a sole arbitrator appointed by the Director, IITM. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole

arbitrator shall be appointed in the manner aforesaid. Such person shall proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Director, IITM of the appeal.

It is also a term of this contract that no person other than a person appointed by such Director, IITM, as aforesaid should act as arbitrator.

It is also a term of this Contract that if the Contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-charge that the final bill is ready for payment, the claim of the Contractor shall be deemed to have been waived and absolutely barred and IITM shall be discharged and released of all liabilities under the Contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act 1996 (26 of 1996) or any statutory modifications or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also term of this Contract that the arbitrator shall adjudicate on only such disputed as are referred to him by the Director, IITM and give separate award against each dispute and claim referred to him and in all cases where the total amount of the claims by any party exceeds Rs.1,00,000/- the arbitrator shall give reasons for the award.

It is also a term of the Contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties.

It is also a term of the Contract that the arbitrator shall be deemed to have entered on the reference on the date of issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

v) Page 55 – Claus 37 "Levy / Taxes Payable by Contractor"

Para (i) shall be substituted as under

"Sales tax including VAT if any or any other tax on materials as well as on Labour and Works in respect of this Contract shall be payable by the Contractor and IITM shall not entertain any claim whatsoever in this respect."

GUARANTEE BOND
FORM OF PERFORMANCE SECURITY (GUARANTEE)
BANK GUARANTEE BOND

In consideration of the Indian Institute of Technology Madras (hereinafter called "The Institute") Having offered to accept the terms and conditions of the proposed agreement betweenand.....(hereinafter called "the said contractor (s))for the work.....(hereinafter called "the said agreement") having agreed to production of a irrevocable bank Guarantee for Rs.....(Rupees.....only) as security / guarantee from the contractor (s) for compliance of his obligations in accordance with the terms and condition in the said agreement.

1) We.....(Indicate the name of the Bank)... (Hereinafter referred to as "the Bank") hereby Undertake to pay to the Institute an amount not exceeding Rs.....(Rupees.....only) on demand by the Institute.

2) We.....do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Institute stating that the amount claimed is required to that recoveries due or likely to be due from the contractor (s). Any such demand on the Bank shall be conclusive as regard the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only)

3) We, the said bank further undertake to pay to IITM any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal. he payment so made by us under this bond shall be a valid discharge of our liability payment therein under and the contractor (s) shall have no claim against us for making such payment.

4) We.....(Indicate the name of the bank).....further agree that the guarantee herein Contained shall remain in full force and effect during the period that would be taken for the said performance of the said agreement and that it shall continue to be enforceable till all the dues of the Institute under or by virtue of the said agreement have been fully paid and claims satisfied or discharged or till Engineer-in-charge on behalf of the Institute certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.

5) We...(Indicate the name of the Bank) ...further agree with the Institute that the Institute shall have the fullest liberty without our consent without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Institute against the said contractor (s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on the part of the Institute on any indulgence by the Institute to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6) This guarantee will not be discharged due to the change in the constitution of the bank or the contractor (s).

7) We.....(Indicate the name of the Bank) ...lastly undertake not to revoke this Guarantee except with the previous consent of the Institute in writing.

8) This guarantee shall be valid up to.....unless extended on demand by Institute. Notwithstanding anything mentioned above, our liabilities under this guarantee is restricted to Rs ... (Rupees) and unless a claim of writing is lodged with us within six month of the date of expiry or extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharge. Dated the.....day of.....for.....(Indicate the name of the Bank)

FORM OF GUARANTEE BOND FOR EMD

In consideration of the Indian Institute of Technology Madras (hereinafter called "The Institute") Having offered to accept the terms and conditions of the proposed tender for the work of
having agreed to production of a irrevocable bank Guarantee for Rs.....(Rupees.....only) as security from the contractor (s) for compliance of his obligations in accordance with the terms and condition in the tender.

1) We.....(Indicate the name of the Bank).....(hereinafter referred to as "the Bank") hereby undertake to pay to the Institute an amount not exceeding Rs.....
(Rupees.....only) on demand by the Institute.

2) We.....do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Institute stating that the amount claimed is required to that recoveries due or likely to be due from the contractor (s). Any such demand on the Bank shall be conclusive as regard the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only)

3) We, the said bank further undertake to pay to IITM any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability payment therein under and the contractor (s) shall have no claim against us for making such payment.

4) We.....(indicate the name of the bank).....further agree that the guarantee herein Contained shall remain in full force during the **SIX months period**.

5) We.....(indicate the name of the bank).....further agree with the Institute that the Institute shall have the fullest liberty without our consent without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Institute against the said contractor (s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on the part of the Institute on any indulgence by the Institute to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6) This guarantee will not be discharged due to the change in the constitution of the bank or the contractor (s).

7) We.....(indicate the name of the bank).....lastly undertake not to revoke this Guarantee except with the previous consent of the Institute in writing.

8) This guarantee shall be valid up to **SIX months** unless extended on demand by Institute. Notwithstanding anything mentioned above, our liabilities under this guarantee is restricted to Rs ... (Rupees) and unless a claim of writing is lodged with us within six month of the date of expiry or extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharge.

Dated the.....day of.....for..... (Indicate the name of the Bank)

ADDITIONAL CONDITIONS - I

1. The contractor shall make arrangement for obtaining electric connections if required and make necessary payments for the same as per rules
2. Other agencies doing works related with this project will also simultaneously execute the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc, for laying/burying in the work of pipes, cable, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for other agencies. Conduits for electrical wiring/cables will be laid in a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rates shall be paid for the same.
3. Some restrictions may be imposed by the security staff etc. on the working and on movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charge, which he may be liable
4.
 - (a) The building work will be carried out in the manner 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 of this account.
 - (b) The work of water supply, internal sanitary installations and drainage work etc. shall be carried out as per local Municipal Corporation or such local body-by-laws and the contractor shall produce necessary completion certificate from such authorities after completion of the work, if required.
 - (c) Water tanks, taps sanitary, water supply and drainage pipes, fitting and accessories should conform to bye-laws and specification of the Municipal Body/Corporation where CPWD specifications are not available. The contractor should engage licensed plumbers for the work and get the materials (fixtures/fittings) tested by the Municipal Body/Corporation authorities wherever required at his own cost.
 - (d) The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charge, which he may be liable.
5. The contractor shall take instructions from the Engineer-in-Charge for stacking of materials in any place. No excavated earth or building materials shall be stacked on areas where other buildings, roads, services compound walls are to be constructed.
6. Construction labour shall not be permitted (except staff for watch and ward) to stay inside the campus. The contractor has to arrange for necessary photo identity passes for the labour for entry in to the campus. The labour movement should be restricted to the areas where work is carried out.

ADDITIONAL CONDITIONS - II

2.0 AGREEMENT

Agreement shall be drawn with the successful Tenderer as per General Conditions of Contract for CPWD works. This document is a priced publication and interested tenderers may purchase and study the various clauses before submitting the tender.

3.0 TIME FOR COMPLETION OF WORK

The time allowed for carrying out the work will be **5 Months** from the 14th day after the date of written order to commence the work or from the first day of handing over the site, whichever is later, in accordance with the phasing if any indicated in the Tender documents.

4.0 AVAILABILITY OF SITE

The site for the work is available.

6.0 CLARIFICATIONS ON TENDER DOCUMENTS

A prospective Tenderer requiring any clarification on the Tender Document may notify Executive Engineer (Civil), IITM at Chennai. The Executive Engineer (Civil) will respond to any request for clarification which he receives earlier than 15 days prior to the deadline for submission of Tenders. Copies of the response shall be forwarded who have attended the meeting.

9. EARNEST MONEY

The Tender should be accompanied by Earnest Money for an amount of **Rs. 82000/- (Rupees Eighty Two Thousand only)**. The EMD shall be paid in the form of Demand Draft drawn in favour of IITM Chennai – 600 036 on any Scheduled Bank payable at Chennai.

Any Tender not accompanied by Earnest Money in an acceptable form shall be rejected by the Employer as non-responsive.

The Earnest Money of the successful Tenderer will be taken as part of the Security Deposit as stipulated in Clause 1A of “General conditions of Contract”.

The Earnest Money will be forfeited to an extent of 50%, if during the period of Tender Validity, the tenderer

- (a) Withdraws his Tender
- or
- (b) Makes any modifications in the terms and conditions of the Tender which are not acceptable to the Employer.

The Earnest Money will be forfeited in full if the successful Tenderer.

- (i) Fails to commence the work on 14th day after the date on which the Employer issues written order to commence the work/ handing over the site which ever is later.

10. ALTERNATIVE PROPOSALS BY THE TENDERERS

The Tenderers shall submit offers, which comply strictly with the requirements of the Tender Document. Alternatives or any modification shall render the Tender invalid.

11. AUTHORITY TO SIGN

- (a) If the Applicant is an individual, he should sign above his full type written name and current address.
- (b) If the Applicant is a proprietary firm, the Proprietor should sign above his full type written name and the full name of his firm with its current address.
- (c) If the Applicant is a firm in partnership, the Documents should be signed by all the Partners of the firm above their full type written 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 Documents. In both cases a certified copy of the Partnership Deed and current address of all the partners of the firms should be furnished.
- (d) 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.

LATE TENDER

Any Tender received after the deadline prescribed will be returned unopened to the Tenderer.

**NOTE ON
GENERAL CONDITION OF CONTRACT AND
SCHEDULES A TO F**

1. The general condition of contract Clauses of Contract and Schedules A to F should be read in conjunction with Correction Slip (C.S.) issued by the DG (Works), CPWD, New Delhi up to **till date**
2. Wherever the expression “The President of India” or “The Government” or “The CPWD” appears in the clauses it should be substituted by the expression “IITM” representing “Indian Institute of Technology Madras”.
3. Wherever the expression “divisional Officer” appears in the Clauses, it should be substituted by the expression “Executive Engineer (Civil)”.
4. “Engineer in Charge” means Executive Engineer (Civil), IITM, and the Engineer means the officer representing the Engineer-in-Charge of the Project.

SPECIAL CONDITIONS

1. No plot rent shall be charged for materials stocked in the institute land during the course of construction with the prior approval the engineer provided all such materials are removed within one month after the works are completed.
2. Royalty or charges due for use of private quarries and private land shall be paid by the Contractor.
3. No labour camps shall be permitted in side the IIT campus. Workers should be made to confine themselves to the work areas and should not wander in to the near by areas / buildings/ forests.
4. If night work is required to be carried out to fulfill the agreed rate of progress all arrangement shall be made by the Contractor inclusive of lighting the area without any claim for extra rate. To the extent possible engaging women labour in the night shift should be avoided.
5. The works shall be carried as per C.P.W.D specifications with Addenda and Corrigenda issued up o the date of receipt of tender and as per best Engineering practice.
6. No variations from, additions to and omissions from in the items of work shall vitiate the contract. All such variations, additions, substitutions etc shall be decided as per the terms of the contract agreement.
7. Child Labour is strictly prohibited.
8. Water will be supplied by I.I.T Madras and the contractors will be charged @ 1.5% of the total value of work done.
9. Holes and chasis for water supply and drainage, etc, shall be provided as directed during progress of work without any claim for extra for finishing.
10. The work shall be carried out with least hindrance to the adjoining building and offices and the contractors will be responsible for any damages, caused to the existing fixtures, electric fitting, etc. in the course of execution and the contractor shall make good any such, damages without any claim for extra.

Special condition for Protection for Environment

1. The debris / construction waste and other waste generated from the work spot should not be thrown inside the campus. All waste material should be taken out of the campus or should be dumped at a place earmarked by the Engineer in charge.
2. All construction material should be stored only at places earmarked by the engineer in charge. Material like cement, aggregate, steel etc should not be stored in buildings that are in use. If any material stored in unauthorized location the same shall got removed at the cost of contractor and necessary rent shall be levied for the area used for storage.
3. Necessary display boards indicating the following shall be displayed in a conspicuous place near the work spot.
 - a) Name of the work
 - b) Name of the contractor and Contact Number
 - c) Tendered cost
 - d) Date of start and stipulated date of completion
 - e) AEE and JE in charge for the work and Contact number
4. A Suggestion box should be kept near the above said board.
5. For Intercarting of various materials animal drawn vehicles are strictly prohibited.
6. Preparation of concrete, mortars in the roads, pavements, under the building bare floors is strictly prohibited.
7. While transporting the materials along the road, spillage of material should be avoided. If any spillage occurs the same should be got cleaned immediately.
8. No vegetation inside the campus should be damaged.
9. Drinking water requirement of the labour should be arranged by the contractor and they should be instruct not to misuse the facilities available in the various buildings.
10. All labour should be dressed properly attending to work wearing dhotis, lungies should be avoided.
11. The workmen shall wear suitable protection devices like mask, gloves, shoes etc,

Any violation of above will attract levy of compensation by the engineer in charge on the contractor.

INSURANCE TO BE TAKEN BY THE CONTRACTOR AND EMPLOYER TO BE INDEMNIFIED

Third Party Insurance

Before commencing the execution of the Works, the contractor shall insure against the liability for any material or physical damage, loss or injury which may occur to any property or life including that of the Employer or to any person, including any employee of the Employer, by or arising out of the execution of the works or in the carrying out of the Contract. The cum insured will be for Rs. 5 lakhs,

Such insurance shall be effected with an insurer and in terms approved by the Employer. The Contractor shall, whenever required, produce before the Engineer-in-charge the policy or policies of insurance and the receipts of payment of the current premiums.

Workmen's Insurance

The Employer's shall not be liable for any payment in respect of any damages or compensation payable according to law in respect or in consequence of any accident or injury or loss of life to any workman or other person in the employment of the Contractor or any sub-contractor, except an accident or injury resulting from any act or default of the Employer, his agents or servants. The Contractor shall insure against such liability with an insurer approved by the Employer for sum of the established norms during the entire period till completion of Period of Maintenance.

Recovery from the Contractor

Without prejudice for the other rights of the Employer against the Contractor in respect of such default, the Employer shall be entitled to deduct from any sums payable to the Contractor the amount of any damages, compensation costs, charges and other expenses paid by the Employer and which are payable by the Contractor under this clause.

Period of Policies

All the insurance covers mentioned above shall be kept alive during the complete period of the contract. Remedy on Contractor's Failure to Insure. If the Contractor shall fail to effect and keep in force the insurance referred to above, or any other insurance which he may be required to effect under the terms of the Contract, then and in any such case the Employer on advice of the Engineer-in-Charge may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Employer as aforesaid from any moneys due or which may become due to the Contractor, or recover the same as debt due from the Contractor.

Damage to Persons and Property – Employer to be Indemnify

The Contractor shall indemnify the Employer against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, except any compensation or damages for or with respect to:

- (a) The permanent use or occupation of land by the works or any part thereof.
- (b) The right of the Employer to execute the works or any part thereof on, over, under, in or through any land.
- (c) Injuries or damage to persons or property resulting from any act or neglect of the Employer, his agents, servants or other contractors, not being employed by the Contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents, such part of the compensations as may be just and equitable having regard to the extent of the responsibility of the Employer, his servant or agent or other Contractors, for the damage or injury.

Signature of Contractor

Executive Engineer (Civil)

CONDITIONS FOR CEMENT AND STEEL BROUGHT BY THE CONTRACTOR FOR USE IN THE WORK

1. The contractor shall procure 43grade (conforming to IS 8112) ordinary Portland cement or PPC as decided by the Engineer in Charge from reputed manufactures of cement having a production capacity of one million tones per annum or more ,such as ACC, Ultratech (L & T), Ramco, Chettinadu, Birla Cement Corporation of India, etc or any approved by the Ministry of Industry, Government of India and holding license to use ISI Certification mark for their product whose name shall be got approved from the Engineer-in –Charge. The tenderer may submit a list of names of cement manufactures whose product they propose to use. The Engineer incharge has right to accept or reject the names of the manufactures which the tenderer propose to use in the work. No change in tendered rates will be accepted if the tendered accepting authority does not accepting the list of cement manufactures given by the tenderer with fully or partly. Supply of cement shall be taken in 50 kg bags bearing manufacture’s name and ISI marking Samples of cement arranged by the contractor shall be got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the contractor do not confirm to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost with in a week’s time of written order form the Engineer-in-charge to do so.
2. The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer- in- charge The cement go-down of the capacity to store a maximum of 2000 bags of cement shall be constructed by the contractor at site or work for which no extra payment shall be more. Double lock provision shall be made in the door of the cement go-down, the keys of one lock shall remain with the engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement go-down. The contractor shall facilitate the inspection of the cement go-down by the Engineer-in-Charge or his authorized representative at any time
3. The contractor shall supply free of charge the cement required for testing, at the frequency and the details of the test shall be decided by the Engineer-in-Charge depending on the quantum of supply in each batch. The cost of tests shall be born by the contractor/Institute in the manner indicated below
 - 3.1. by the contractor, if the results show that the cement does not conform to the relevant BIS Codes.
 - 3.2. by the Institute, if the results show that the cement conforms to relevant BIS Codes
4. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in the contract and shall be governed by conditions laid there in. Items for which standard coefficients of cement consumption are not available in DSR 2002,the same shall be decided by the Engineer-in-charge.
5. Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.
6. The cement bags shall be stacked on proper floors consisting of two layers of dry bricks laid on well consolidated earth at a level of at least one foot above ground level. The stacks shall be in rows of two and 10 bags high with a minimum of 0.6 m clear space all round. The bags should be placed horizontally continuous in each line. actual size/shape of go-down shall be as per site requirements and nothing shall be paid on this account. The decision of Engineer-in-charge regarding the capacity of the godown shall be final.
7. Cement register for the cement shall be maintained at site. The account of daily receipt and issue of cement shall be maintained in register in the proforma prescribed and signed daily by the contractor or this authorized agent.

8. Steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.
9. The standard section weights referred to as standard tables of CPWD Specifications shall be considered for conversions of length of various sizes of MS bars and cold Twisted bars/high yield strength deformed bars/thermo-mechanically treated bars into weight are as under

Size (dia in mm)	Weight in kg/m
6	0.222
8	0.395
10	0.617
12	0.888
16	1.579
18	1.999
20	2.467
22	2.985
25	3.855
28	4.836
32	6.316
36	7.994
40	9.869
45	12.490
50	15.424

For steel, measurement will be regulated on sectional weight basis, weight being calculated with help of above tables. The weight shall be taken as per actual basis. If actual weight found lower than the standard weight but within tolerance limits as per relevant IS codes. Nothing extra shall be paid for over weight of steel section than given in the table.

The mild steel to be used shall conformed to IS 432-cold twisted bars/High yield strength deformed bars and thermo-mechanically treated bars shall conformed top IS 1786. The contractor shall submit challan / bill / gate pass /cash memo in support of material purchased from manufactures/their authorized dealers/authorized producer.

Over theoretical quantity of materials so computed a variations shall be allowed as specified in schedule F. if the quantities of materials actually used are less than the theoretical Quantities including authorized variations, the cost at market rates plus 10% including cartage to the site of such quantities of materials as determined by Engineer-in-charge, which shall be final and binding, shall be recovered from the contractor without prejudice to department rights/remedies available under the contractor, for action against substandard work.

MEASUREMENT & PREPARATION OF BILL

14.1 Computerized Bill to be submitted by the Contractor

Conventional measurement book shall be replaced by a bound volume of computerized measurements to be furnished by the contractor, duly machine numbered for the pages, and with MB number given by the Institute. The pages of these measurements books shall be of A4 size. All these measurements books shall be serially numbered and a record of these computerized measurements book shall be maintained in a separate register. The same format as in existing measurement books shall be used for the computerized measurement books. The measurements shall be carried forward from the previous recorded measurement as per the existing procedure.

14.2 Mode of measurements

The measurements shall be recorded and entered in the computerized format in the first instance by the contractor and a hard copy shall be submitted to the Institute. All entries shall be made as per the existing procedure. This measurements shall then be 100% checked by the Junior Engineer/ Assistant Engineer, and test checked by the Asst. Executive Engineer and Executive Engineer/ Executive Engineer (Civil) as per the existing procedure. If Junior Engineer is not available, then the Asst Executive Engineer shall perform 100% check of the measurements.

The contractor shall incorporate all such changes or corrections, as may be done during the checks / test checks, to his draft computerized measurements and submit the final computerized measurements in the form of a book, duly hard bound in red colour on the lines of the conventional measurements books now in use with its pages machine numbered.

The Junior Engineer / Asst. Engineer, Assistant Executive Engineer, Executive Engineer/ Executive Engineer (Civil) shall check the computerized measurements to ensure that all the changes or corrections made by them earlier in the draft measurements are correctly incorporated in the final measurements. This book shall be treated as computerized measurement.

The Junior Engineer/ Asst. Engineer, Assistant Executive Engineer and Executive Engineer shall record the necessary certificate for their checks and test checks as per the existing procedure in this computerized measurement books. The computerized measurements book shall be allotted a serial number as per the register of computerized measurement books maintained by IITM.

14.3 Cuttings / over writing/ insertions in the computerized measurements books are not allowed.

The computerized measurements books given by the contractor, duly bound, with its pages numbered, shall have no cutting or over writing. In case of any error, computerized misprints shall be canceled and the contractor shall re submit a fresh computerized measurements books.

This should be done before submission of corresponding computerized billing. The contractor shall submit as many copies of computerized measurement books as may be required and as specified in the NIT / contract for the purpose of reference and recording the various office of the department.

14.4 Computerized bill to be submitted by the contractor

The contractor shall submit his running and final bill in a computerized form in the same format as the existing conventional bills with all the pages machine numbered and hard bound made and with all the entries as per the existing procedure. The contractor shall submit as many copies of the computerized bills as may be required for the purpose of reference and record. The bill shall be carried forward from the previous running account bill as per the existing procedure. The computerized bill may be processed as per the existing procedure.

Computerized bill to be submitted by the contractor

The contractor shall submit his running and final bill in a computerized form in the same format as the existing conventional bills with all the pages machine numbered and hard bound made and with all the entries as per the existing procedure. The contractor shall submit as many copies of the computerized bills as may required for the purpose of reference and record. The bill shall be carried forward from the previous running account bill as per the existing procedure.

The computerized bill as may be processed as per the existing procedure.

Signature of the Contractor

Executive Engineer (Civil)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS

Bill of Quantities

Name of the work: **Construction of new building to accommodate Clean Room no 4 in the quadrangle of ESB.**

Tender No : **51 / 2012 - 13 / Civil.**

S. No	Qty	Description of Item	Unit	Rate Rs in words & figures	Amount
1	1.00	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	No		
2	145.00	Earthwork in foundation trenches or drains not exceeding 1.5 m in width or 10 sqm on plan including dressing of sides and ramming of bottoms lift up to 1.5 m including getting out the excavated soil and disposal of surplus excavated soils as directed, within lead of 50 m(All kinds of soil)	cum		
2.a	36.00	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).	cum		
3	248.00	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth upto 50 m and lift upto 1.5 m, disposed soil to be levelled and neatly dressed .All kinds of soil	100Sqm		
4	144.00	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum		
5	66.00	Supplying and filling of quarry dust in layer not exceeding 20cm and watering each layer throughly with consolidation and ramming etc.complete for basement and in foundation.	cum		

S. No	Qty	Description of Item	Unit	Rate Rs in words & figures	Amount
6	32.00	Supplying and filling in plinth with river sand under floors including watering, ramming, consolidating and dressing complete.	cum		
7	32.00	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :(1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40mm nominal size).	cum		
8	291.00	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration	sqm		
8.a	291.00	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor :With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	sqm		
8.b	2777.78	Supplying chemical emulsion in sealed containers including delivery as specified.Chlorpyriphos/ Lindane emulsifiable concentrate of 20%	Lit		
9	696.00	Centering and shuttering for retaining walls / slabs / beams etc with film coated plywood shuttering board or using steel wall form work including strutting, propping etc., and removal of formwork after necessary curing interval as specified by IS 456. The rate inclusive of applying demoulding agent manufactured by M/s Fosroc, SIKA, CeraChem, Grace or BASF, deshuttering charges etc (Formwork should be 100% water tight without any gaps / dents / undulation, etc. complete. Formwork should be designed and executed for the concrete dimensions, vertical plumb etc. Maximum allowable tolerance for concrete dimensions is ± 5 mm and no tolerance for verticality. The rate should be inclusive of necessary staging, supports etc. complete at all height.	sqm		

S. No	Qty	Description of Item	Unit	Rate Rs in words & figures	Amount
10	16650.00	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Thermo-Mechanically Treated bars	kg		
11	111.00	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC work including laying but excluding the cost of centring, shuttering, finishing and reinforcement including admixtures as per direction of Engineer-in-charge. M-25 grade reinforced cement concrete by using 410 kg of cement per cum of concrete. All work up to floor v level.	Cum		
11 a	111.00	Extra for providing richer mixes at all floor levels Providing M-35 grade concrete instead of M-25 grade BMC/ RMC. (Note : Cement content considered in M-35 is @ 360 kg/ cum)	Cum		
12	49.00	Brick work with fly ash concrete brick class designation M10 in superstructure above plinth level up to floor V level in all shapes and sizes in :Cement mortar 1:4 (1 cement : 4 coarse sand)	cum		
13	209.00	Cement plaster in fine sand , 12 mm thick cement plaster mix 1:4 (1 cement :4 fine sand)	Sqm		
14	500.00	6 mm cement plaster 1:3 (1 cement: 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.	sqm		
15	256.00	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer 6mm thick cement plaster 1:3 (1 cement: 3 coarse sand) finished rough with sponge.	sqm		
16	960.00	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :Water thinnable cement primer	sqm		
17	731.000	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm		

S. No	Qty	Description of Item	Unit	Rate Rs in words & figures	Amount
18	731.00	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade Two or more coats on new work	Sqm		
19	269.00	Finishing walls with Acrylic Smooth exterior paint of required shade: New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm		
20	219.00	Kota stone slab flooring over 20 mm (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 cement mortar 1 : 4 (1 cement : 4 coarse sand) :25 mm thick.	Sqm		
21	75.00	Providing and fixing anodised aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular and other sections of approved make conforming to IS : 733 and IS : 128. anodised transparent or dyed to required shade according to IS:1868 (Minimum anodic coating of grade AC 15) fixed with rawl plugs and screws or with fixing clips or with expansion hold fasteners including necessary filling up of gaps at junction at top, bottom sides with required PVC/neoprene felt etc.Aluminium sections shall be smooth, rust free, straight mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing / panneling, cp brass/stainless steel screws all complete as per architectural drawings and the direction of engineer incharge, for fixed portion (INDAL / ZINDAL). For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required (Fittings shall be paid for separately).Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg		
22	11.00	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-incharge. (Cost of aluminium snap beading shall be paid in basic item): With 4.0 mm tk plain glass.	sqm		

S. No	Qty	Description of Item	Unit	Rate Rs in words & figures	Amount
23 a	0.035	Providing wood works in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position - Second class teakwood	cu m		
23 b	2.00	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters: 30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	Sqm		
23 c	2.00	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured)	sqm		
23 d	5.00	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade. Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	Sqm		
23 e	2.00	Providing and fixing aluminium tower bolts ISI marked anodised (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. 150 X 10 mm	Each		
23 f	2.00	Providing and fixing aluminium handles ISI marked anodised (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. 125 mm	Each		
23 g	1.00	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc complete (best make of approved quality).	Each		
24 A	220.00	Providing and laying pressed clay tiles (as per approved pattern 18 mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound laid over a bed of 20 mm thick cement mortar 1:4 (1cement : 4 coarse sand) and finished neat complete.	sqm		

S. No	Qty	Description of Item	Unit	Rate Rs in words & figures	Amount
24 b	220.00	Lime concrete terracing on roofs average thickness 10 cm laid to fall with 25 mm nominal size brick aggregates and 50 % of lime mortar 1:2(1 lime putty and 2 surkhi) rammed and finished with gur and belgiri treatment complete including rounding of junctions with parapet wall complete	sqm		
25 a	15.24	Supplying and fixing of polyethylene baord of 20mm thick Hydrocell XL board of 20 mm thick of Fosroc make or equivalent approved by Engineer-in-charge for the expansion joint as per manufacturer specification. The cost includes all scaffolding at all levels. The width of board is 100 mm. The old expansion board to be removed up to depth of 100 mm before fixing the new boards.	RM		
25 b	15.24	Supplying and filling the expansion joints up to 40 mm width and depth of 25 mm with poly urathane PU sealant of Colpor® 200 Fosroc make /. Masterflex 460 of BASF or equivalent approved by Engineer in-charge on top of back up rod (rate including backer rod) with material of Supreme with two coats of suitable primer. The cost to include scaffolding at all heights.	RM		
26	4500.00	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete:	kg		
Total Amount in Rs					

Total Amount in Rs. (In words)

Signature of the Contractor

Executive Engineer (Civil)