



INDIAN INSTITUTE OF MANAGEMENT KOZHIKODE

IIM KOZHIKODE CAMPUS P.O, KOZHIKODE 673 570

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Web site: www.iimk.ac.in

TENDER

FOR

**PAINTING AND ALLIED MAINTENANCE WORKS IN
VARIOUS ACADEMIC BUILDINGS.**

PART I (TECHNICAL BID)

Issued to: -----

Tender No.	: IIMK/CIVIL/19/2019-20
Date of Issue of NIT	: 11.11.2019
Date of Issue of Tender Form	: 11.11.2019 to 09.12.2019
Due Date of Submission	: 10.12.2019 up to 3:00 p.m.
Date of Opening of Technical bid	: 10.12.2019 at 4:00 p.m.
Date of opening of financial bid	: Will be announced later
Cost of Tender Form (Original)	: Rs.1120/- (Including 12% GST)
Probable Amount of Contract	: Rs. 77.45 Lakhs

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INDIAN INSTITUTE OF MANAGEMENT KOZHIKODE

I. NOTICE INVITING TENDER

1.1.1 Sealed and competitive item rate Tenders are invited by the Indian Institute of Management Kozhikode (Kerala) in Two-Bid system i.e. (i) Technical Bid and (ii) Price Bid for the following work: -

- a) Tender No. : IIMK/CIVIL/19/2019-20
- b) Name of work : Painting and allied maintenance works in various Academic buildings of IIMK Campus.
- c) Time of completion : Five Months.
- d) Earnest Money : Rs. 2.35 lakhs
- e) Cost of tender forms : Rs.1120/- (Including GST @ 12%).

1.2 ELIGIBILITY CRITERIA FOR PARTICIPATION IN BID/TENDER

Every Tender should have satisfactorily completed at least three works of similar nature costing Rs. 31.00 lakhs each or two similar completed works of Rs. 46.50 lakhs each or one similar completed work costing of Rs. 62.00 lakhs during the last 7 years. For this purpose, 'cost of works' shall mean gross value of the completed work including the cost of materials supplied by the Govt./Client, but excluding those supplied free of cost. This should be certified by an officer not below the rank of Executive Engineer/Project Manager or Equivalent. Similar works means Civil construction works / Civil maintenance works of buildings. Tenderers are required to submit TDS Certificates in form 16A in case of similar works are executed for a private body which shall form basis for establishing the completion cost of works executed by the bidder

- 1.3** Every Tender should be accompanied by a forwarding/covering letter in which the Tenderer should clearly mention the details of additional or loose papers/documents/certificates attached and all such papers/documents/certificates should be serially numbered from first page to last page duly initialed by the tenderer.
- 1.4** Tenderers should quote their rates both in figures and in words. The Schedule of Quantities must be fully priced and the total of each page along with carried over figures of the previous page shall be given in ink and signed by the tenderer. No blank space shall be left. Tenders with rates quoted in any other form, other than the prescribed Schedule of Quantities, are liable to be rejected.
- 1.5** Tenders not properly filled, mutilated, with incorrect calculations or generally not complying with the conditions are liable to be rejected.
- 1.6** The Tenders should be submitted under Two Bid system as mentioned below:
(a) Part I: Technical Bid comprising of all techno-commercial details such as NIT, General Conditions of Contract, Technical Specifications, Drawings,

Earnest Money Deposit (EMD), proof for having similar works executed, any other matter the tenderer wishes to submit duly signed with official seal, etc. This is to be submitted in a sealed cover/envelope duly super scribed as “**Part I (Technical Bid) for Providing roof covering for open walkways/links connecting Seminar Hall & Classroom Blocks A & B in IIMK Campus**” and

(b) Part II: Price Bid comprising of only the Schedule of Quantities duly filled in and signed with official seal. This is to be submitted in a sealed cover/envelope duly super scribed as “**Part II (Price Bid) for Providing roof covering for open walkways/links connecting Seminar Hall & Classroom Blocks A & B in IIMK Campus**”. No other paper other than the Schedule of Quantities contained in this cover/envelope shall be accepted.

Both the above Bids, i.e. Part I and Part II in sealed covers/envelopes, shall be put into a larger cover/envelope and sealed properly. This larger cover/envelope (containing the Part I and Part II in sealed covers) shall be submitted after super scribing the name of the work.

1.7 Receipt and Opening of Tenders

Sealed Tenders super scribing the name of the work on the top of the envelop should be either deposited in the “Tender Box (Engineering)” kept in the Reception counter of the Administrative Block of the Institute or sent by Registered Post to reach the office of “The Chief Administrative Officer” on or before **10.12.2019 at 3:00 p.m.** The Institute will not assume any responsibility whatsoever for late receipt of Tenders. Tenders received late shall be summarily rejected.

Part I (Technical Bid) will be opened at 4:00 p.m. on the same day in the presence of those tenderers who are present in the office at the time of opening. Thereafter, after evaluation of the Technical Bids, only those tenderers whose Technical Bid (Part-I) are found acceptable shall be opened on a later date. Prior notification shall be given to all tenderers who qualify for opening of the Price Bid. Part II (Price Bid) of those tenderers who do not qualify for opening of the Part II (Price Bid) shall be returned.

The tenders along with all necessary documents in sealed envelopes should be sent to the following address.

**THE CHIEF ADMINISTRATIVE OFFICER,
INDIAN INSTITUTE OF MANAGEMENT KOZHIKODE,
I.I.M.K. CAMPUS (P.O.),
KOZHIKODE – 673 570,
KERALA.
Phone: 0495-2809100.**

1.8 Authorized Signatory

If the tender is made by or on behalf of a company incorporated under the Companies Act (of 1956), it shall be signed by their **Managing Director** or one of the **Directors** duly authorized on that behalf. If it is made by a partnership firm, it shall be signed with the co-partnership name by a member of the firm who shall sign his own name and give the name and address of each partner of the firm and attach a copy of Power of Attorney with the

Tender authorizing him to sign on behalf of the other partners. A certified copy of the registered partnership deed shall also be submitted along with the tender.

The tenders shall be duly signed by the authorized signatory. Unsigned tenders shall summarily be rejected and no correspondence shall be entertained. The tenderer shall sign on each page of the tender document as a token of acceptance of the tender conditions and also Schedule of Quantities. Unsigned tenders shall not be considered.

1.9 Acceptance Period

The tender shall remain valid for acceptance for a period of 90 days from the date of opening of tender. Any withdrawal of offer / bid during firm period will entail forfeiture of the EMD.

1.10 Site Inspection

Every tenderer is expected to inspect the site of the proposed work at his own cost before quoting his rates. He must also go through all the drawings and documents. No extra amount or payment would be released by IIMK for claim by Vendor for any extra work carried out unless it is authenticated by the representative of IIMK. Competent Vendors may only apply for the execution of the work in IIMK terrain. Keeping all possible contingencies in mind of working in IIMK terrain. It will be construed that the contractor has inspected the site and satisfied himself and the quoted rates shall hold good in all conditions.

1.11 Schedule of quantities

A schedule of approximate quantities for various items accompanies this tender. It shall be definitely understood that the Institute/Consultant do not accept any responsibility for the correctness or completeness of the schedule, in respect of items and quantities and this schedule is liable to alterations by omissions, deductions or additions at the discretion of the Institute/ Consultant without affecting the terms of the contract and the Contractor's quoted rate is valid for all such variations. The Institute / Consultant reserves the right to completely delete any item from the scope of the work without affecting the terms of the contract.

1.12 Contractors' Rates

The contractors' rates must include the cost of transportation of material to the site, loading, unloading, storage at site, ESI, PF, KCWWF, all taxes such as, Works contract tax, GST, IT, Customs & Excise Duties & Octroy , etc. and the fixing or placing in position for which the items of work is intended to be operated. The rate would also include any earth work removal and filling.

The Institute will not provide Form 'C' or any other such certificates to the Contractor.

The rates shall remain firm, throughout the contract period including the extended period if any. No extra payment would be released by IIMK unless IIMK desires extra work to be carried out.

1.13 Interpretation

In interpreting the specifications, the following order of decreasing importance shall be followed:

- (a) Nomenclature of Item as given in the Schedule of Quantities
- (b) Drawings
- (c) Particular or special specifications
- (d) General Specifications

Matters not covered by the specifications given in the contract as a whole, shall be covered by the relevant Indian Standard Codes. If such codes for a particular subject have not been framed, the decision of the Institute/Consultant shall be final and binding.

1.14 Alterations in Tender Documents

No alterations shall be made by the tenderer in the Tender documents. Instructions to the Contractors, Contract Form, Conditions of the Contract, Drawings and Specifications, and if any such alterations are made or any special condition attached, the tender is liable to be rejected.

1.15 Acceptance of Tender

The acceptance of the tender will rest with the Institute, which does not bind itself to accept the lowest tender and reserves to itself the authority to reject any or all of the tenders received, without assigning any reason(s). The Institute reserves the right of accepting the whole or any part of the tenders received and the tenderers shall be bound to perform the same at their quoted rates.

1.16 Site Supervision

The work shall be carried out under the direction and supervision of the Institute/ Particular or special specifications or their representative at site. On accepting the tender, the contractor shall intimate the name of his accredited representative who would be supervising the construction and would be responsible for taking instructions for carrying out the work on day to day basis.

The Institute/ Consultant or their representative at site shall have access to the workshops of the successful tenderers so as to ensure themselves of the quality of material and workmanship.

1.17 Quality

The Institute's decision with regard to the quality of the material and workmanship will be final and binding. Any material rejected by the Institute/ Consultant shall be immediately removed by the contractor from the site at his own cost.

1.18 Commencement of work/Period of Completion

The Contractor shall commence work on site within **Seven days** from the date of issue of the work order. This date shall be considered as the date of commencement of the said work.

Time is the essence of the Contract. All works as per this tender will be completed within **Five months** from the date.

Completion period includes Monsoon period as well as festival period.

1.19 Scope of Work

The following works are broadly envisaged in this Contract – Providing roof covering for open walkways/ links connecting Seminar Hall and Classroom Blocks A&B in IIMK Campus

1.20 Income Tax

Every tenderer shall furnish along with the tender the copy of the Income Tax PAN Card, unless the same has been already furnished to the Institute, without which his tender is liable to be rejected. The Institute will deduct amount towards Tax Deducted at Source (TDS) as per the latest Income Tax Rules, from all payments made to the Contractor.

1.21 Goods Service Tax (G S T)

In the case of contract involving materials required for the works, the contractor shall have a valid registration number before entering in to the contract and it is mandatory for the contractor to mention registration number in the Bills/Claims. All payments made to the contractor will attract TDS Liability and, therefore, it is the responsibility of the contractor to obtain the Liability Certificate from the Sales Tax Department for release of final payment against Bills/Claims as per GST rules.

1.22 Defects Liability Period

Any defects which develop within 'Defect Liability Period' of **Twelve months** from the actual date of completion will have to be rectified by the contractor at his own cost. In case of failure to do so, the Institute with the concurrence of the Project Manager/Consultant, shall get the rectification work done by some other agency at the risk and cost of the contractor. The rectification of such defects shall be done immediately on receipt of written notice from the Institute/ Project Manager/Consultant and such defects may extend "the liability period" for a period of 12 months from the date of rectification.

1.23 Part Occupation

If Institute wants to occupy areas in part, the contractor shall have to complete the work of the areas in conjunction with the Institute and hand over the same to the Institute without affecting any of the Clauses of the contract agreement.

1.24 Contract Signing

After acceptance of the tender, the tenderer shall sign the necessary contract papers within seven days of the intimation in the prescribed form. Expenses for the agreement including cost of stamp papers etc. shall be borne by the contractor. In case of delay the 'Earnest Money' shall be forfeited and the tender cancelled or the contract enforced as per terms of the tender and the tenderer shall thus be bound even though the formal agreement has not been executed and signed by the tenderer.

1.25 Earnest Money Deposit (EMD), Performance Guarantee (Security Deposit) and Retention Money

- a) The tender document shall be accompanied by earnest money of **Rs. 2.35 Lakhs (Rupees Two Lakhs and Thirty Five Thousand Only)** by Deposit at call receipt of Schedule Bank/ Fixed Deposit Receipt of a schedule Bank/ demand Draft of a Schedule Bank valid for

a minimum period of 3 (three) months issued/assigned in favour of Indian Institute of Management Kozhikode payable at Kozhikode.

The tender received without EMD or with EMD in any form other than as stated above is liable to be rejected. The EMD will be refunded to the unsuccessful tenderer within one month of the acceptance of the tender.

- (b) **Performance Guarantee (Security Deposit):** Within seven days of the award of the contract, the contractor shall furnish to the Institute a bank guarantee/ Fixed Deposit/ Demand Draft for a sum equivalent to 7% of contract value as Performance Guarantee (Security Deposit) valid for the duration of the contract period plus two months. EMD already deposited along with tender shall be returned on furnishing the performance guarantee.
- (c) **Retention Money:** Retention money @ 5% of each running Bill value, excluding Secured Advance, shall be deducted from each running account payment.
- (d) The Retention Money/EMD shall not bear any interest.

1.26 Refund of Deposit

Security deposit shall be returned after virtual completion of all the works and the Retention Money recovered from the bills, shall be refunded only after the defects liability period of 12 (twelve) Months.

1.27 Supply of materials

The Institute does not bind itself to supply any materials whatsoever required for the work. However, in case of supply of any materials by the Institute, the Contractor shall be responsible for the safe custody and proper utilization of such materials for the works as instructed by the Institute/Project Manger/ Consultant.

The quality/make of material to be purchased by the contractor shall have the approval of the Institute/Project Manager/ Consultant before incorporation within the works. For the purpose of payment, actually recorded quantities shall be taken into consideration. Rejected material shall be removed at once from the site of work at contractor's cost.

1.28 Insurance:

The successful contractor shall take out **Contractor's All Risk (CAR)** insurance policy, in the name of the contractor, the beneficiary being **Indian Institute of Management Kozhikode (Kerala)** and the original policy shall be deposited with the Institute. The policy shall cover clauses as under:

- i) The Contractor shall at all times indemnify and keep indemnified the Institute and its officers, servants, agents and any other guest or person moving in the Campus Area premises from and against all third party claims whatsoever (including but not limited to property loss and damage, personal accident, injury or death of/to property or person of any Sub-contractor and/or the servants or agents of the contractor, any sub-contractor(s) and/or the Institute) and the contractor shall at his own cost and initiative at all times up to the successful conclusion of the defect liability period specified in Clause 1.20 hereof take out and maintain all insurable liabilities under this Clause, including but not limited to third party insurance and liabilities under the Motor Vehicles

Act, Workmen's Compensation Act, Fatal Accidents Act, Personal Injuries Insurance Act, Emergency Risk Insurance Act and/or other Industrial Legislation from time to time in force in India with insurance company(ies) approved by the Institute, and such policy(ies) shall be of not lesser limit than the limits hereunder specified with reference to the matters hereunder specified, namely:

- a) **Workmen's Compensation Insurance** - to the limit to which compensation may be payable under the laws of the Republic of India.
- b) **Third Party Insurance** - body injury and property damage to the limit of not less than **Rs.1, 00,000/- (Rupees one lakh only)** in each accident at each job site and to a limit of not less than **Rs. 5, 00,000/- (Rupees five lakhs only)** for all accidents at all job sites.

Provided that the limits specified above shall operate only as a specification of minimum limits for insurance purposes, but shall not in any way limit the contractor's liability in terms of this Clause to the limit(s) specified.

- ii) Should the Contractor fail to take out and/or keep afoot insurance as provided for in the foregoing Sub-Clause, the Institute shall be entitled (but without obligation to do so) to take out and/or keep afoot such insurance at the cost and expense of the Contractor, and without prejudice to any other rights or remedies of the Institute in this behalf, to deduct the sum(s) incurred, from the dues of the Contractor.
- IV) **Period of Policies:** All insurance covers mentioned above shall be kept alive till the completion period of contract and defects liability period.

1.29 Payments

Only One bill shall be prepared every month, based upon the joint measurement by the Contractor and Institute's representative. Contractor shall submit 3 copies of the bill and 3 copies of the measurement sheet.

1.30 Compensation for delay

If the contractor fails to maintain the required progress in terms of Clause 1.16 or to complete the work and clear the site on or before the contract period or the extended date of completion, he shall, without prejudice to any other right or remedy available under the law, pay the Institute on account of such breach, the agreed compensation amount calculated at the rates stipulated below and the Institute's decision in writing shall be final and binding in this respect.

This will also apply to items or group of items for which a separate period of completion has been specified.

Compensation for delay of work : @1% per week of delay

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed **10% of the Tended Value of work.**

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Institute. In case, the contractor does not achieve a particular milestone mentioned in Clause 1.16, or the re-scheduled milestone(s), the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time.

1.31 Deviations / Variations Extent and Pricing

The Institute shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer in charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

1.31.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor,

- i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus.
- ii) 25% of the time calculation in (i) above or such further additional time as may be considered reasonable by the Institute.

1.31.2 Deviation, Extra items and Pricing

In the case of extra items(s) the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the Engineer in charge shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the Contractor shall be paid in accordance with the rates so determined. Market rate shall be the rate as decided by the Engineer in charge on the basis of cost of materials and labour at the site where the work is to be executed plus 10% to cover all overheads and profits of the contractor.

1.31.3 Deviation, Substituted items, Pricing

In the case of substituted items, the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the aforesaid para.

- a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted) the rate

payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

- b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) to be decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

1.32 Advances

The Contractor shall not be entitled to get any sort of advances for the work.

1.33 Water and Electricity

Water and Electricity shall be arranged by the Contractor at his own expense. In case of failure of power, the contractor shall have alternate arrangement (DG Set etc.) to keep the work in progress at his own cost.

1.34 Receipt of Tenders

Tenders along with all the copies, drawings etc. in sealed envelope will be received as stated on the cover of this Notice.

1.35 E.S.I. & Provident Fund Obligations

The Contractor shall include in his rates all expenses towards meeting obligations under the Employees State Insurance Act and the Provident Fund Act. He shall follow all rules and regulations required under the Act as may be in force from time to time. All employees engaged upon the Works shall be covered under these schemes and the required amounts deposited by him directly with the concerned authorities. All records in connection with the above shall be properly maintained by the Contractor and produced for scrutiny by the Institute/Consultant whenever called for.

1.35 Supplier / Labour Payment

The Contractor shall pay to its Suppliers/ Labourers within reasonable time fixed with them. The Institute shall not be responsible during the period of Contract or after completion of Project for Contractors liabilities towards Suppliers/Laboures.

APPENDIX - I**SUMMARY OF VARIOUS CLAUSES**

1.	Validity of Tender	1.9	90 days
2.	Address, date & time of submission	1.7	The Chief Administrative Officer Indian Institute of Management Kozhikode I.I.M. Kozhikode Campus .P.O, Kozhikode - 673 570 Date: 09.12.2019 up to 3:00 p.m.
3.	Period of commencement from Institution's order (Mobilization Period)	1.18	7 days
4.	Time of Completion	1.18	Five Months
5.	Amount of Compensation for delays	1.30	1.0% per week of delay subject to a max. of 10.0 % of total value of work
6.	Period of Maintenance	1.22	Twelve Months
7.	Amount of EMD	1.25(a)	Rs. 2.35 Lakhs (Rupees Three Lakhs and Thirty Five Thousand Only)
8.	Amount of Security Deposit	1.25(b)	7% of Contract Value by way of Bank Guarantee/Fixed Deposit /Demand Draft
9.	Interim Certificates (R.A.Bills)	1.29	Once in a month
10.	Third Party Insurance	1.28 (i) b)	Rs.1, 00,000/- (Rupees One Lakh) for any one accident.

PROFILE OF THE VENDOR

(All fields are mandatory)

I. Name of the Contractor :

II. Address for communication:

III. Contact details

a. Telephone Number :

b. Mobile Number :

c. Email ID :

IV. GST NO :

II. TENDER FORM

Indian Institute of Management Kozhikode
I.I.M. Kozhikode Campus P.O., Kozhikode - 673 570

Dear Sirs,

Sub: - Painting and allied maintenance works in various Academic buildings of IIMK.

With reference to the tender invited by you for the above work, I/we write this after having:

- a) Examined the, specifications, Schedule of Quantities, instructions to tenderers, draft agreement and the conditions of contract annexed thereto (here-in-after called the Contract Documents) relating to construction.
- b) Visited and examined the site of the proposed work and the terrain profile of IIMK
- c) Acquired the requisite information as affecting the tender.

I/We undersigned, hereby offer to execute the above work in strict accordance with the contract documents for the consideration to be calculated in terms of the priced Schedule of Quantities.

I/We undertake to complete the whole of the works as per the attached schedule within a period of **Five Months** from the date of issue of intimation by you that our tender has been accepted and upon receiving possession of the site. I/We further undertake that on failure to adhere to the programme of work as approved by the Institute, subject to the conditions of the contract relating to extension of time, I/We shall pay to the Institute the sum named in the Appendix to the conditions of contract, as 'Compensation for delay'.

I/We hereby deposit with you an 'Earnest Money' of **Rs. 2,35,000/- (Rupees Two Lakhs and Thirty Five Thousand Only)** carrying no interest and I/We do hereby agree that this sum shall be forfeited in the event of the Institute accepting my/our tender and I/We failing to take up the contract when called upon to do so.

I/We further agree to the deposit of 7% of contract value as **PERFORMANCE GUARANTEE** (Security Deposit) within fourteen days of the award of the contract in the form of a Bank guarantee/ Fixed deposit/Demand Draft valid for the duration of the contract period.

I/We further agree to the deduction of 5% from the 'Interim Payment' towards the 'Retention Money' which will be refunded as per the relevant Clauses in the agreement.

Yours faithfully,

Name of the partners of the firm

OR

Name of the persons having Power-of-Attorney to sign the contract.

III. DRAFT AGREEMENT

ARTICLES OF AGREEMENT

Made the _____ day of _____ 2019

between **INDIAN INSTITUTE OF MANAGEMENT KOZHIKODE**
I.I.M. Kozhikode Campus P.O., KOZHIKODE - 673 570

(Hereinafter called 'The Institute') on the one part and
M/s _____

(Hereinafter called 'the Contractor' on the other part

WHEREAS the Institute is desirous of execution of

_____ (Hereinafter called the Work).

and has caused Drawings and Schedule of Quantities showing and describing the work to be done to be prepared by or under the direction of **M/s**
.....

AND WHEREAS the contractor has supplied the Institute with a fully priced copy of the said Schedule of Quantities (which copy is hereinafter referred to as 'The Contract Bills') AND WHEREAS the said Drawings (hereinafter referred to as the 'Contract Drawings) and the contract bills have been signed by or on behalf of the parties hereto : AND WHEREAS the contractor has furnished a Bank guarantee for the sum of _____ (Rupees _____) issued by _____ branch of _____ Bank (B.G. No _____ dated _____ / FD dated/ DD Dated) as performance guarantee to the Institute.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them under Section 'Definitions in the General Conditions of Tender Document issued by the Institute and accepted by the Contractor while submitting his bid dated _____.
- 2.a) The following documents included in the tender bid shall be deemed to form and be read and construed as part of this Agreement along with amendments negotiated and confirmed in various subsequent letters exchanged as mentioned herein after :
 - I) Notice Inviting Tender
 - II) Tender Form
 - III) Draft Agreement
 - IV) General Conditions of Contract
 - V) Safety Code
 - VI) Technical Specifications
 - VII) List of approved makes of materials

b) The following documents shall also be deemed to form and to be read and construed as part of this Agreement and shall be complimentary to one another.

- i) Letter No. _____ dated _____ inviting tender`
- ii) Letter No. _____ dated _____ of Contractor submitting the tender bid.
- iii) Work Order No. _____ Dated _____ .

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. For the consideration hereinafter mentioned, the contractor will upon and subject to the conditions annexed carry out and complete the work shown upon the contract drawings and described by or referred to in the Contract Bills and in the said conditions.
2. The Institute will pay the contractor the sum of ` _____ (Rupees _____) (hereinafter referred to as the contract sum) or such other sum as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. The term "the Consultant" the said conditions shall mean the said **M/s**..... or in the event of his ceasing to be the Consultant for the purpose of this contract, such other person as the Institute shall nominate for that purpose, not being a person to whom the contractor shall object for reasons considered to be sufficient by an arbitrator appointed in accordance with the said conditions. Provided always that no person subsequently appointed to be the Consultant under this contract shall be entitled to disregard or overrule any certificate or opinion or decision or approval or instruction given or expressed by the Consultant for the time being.
4. The said Conditions shall be read and construed as forming part of this Agreement, and the parties hereto shall respectively abide by, submit themselves to the conditions and perform the agreements on their parts respectively in such conditions contained.
5. No extra payment for extra work claimed by the vendor due to profile condition or any other matter could be sanctioned by IIMK unless IIMK desired addition work or additional quantity to be executed. Only competent vendors having carried out similar work to bid for the work.

AS WITNESS our hands this _____ day of _____ 2019

Signed by the said
in the presence of

Institute

Witness
Name :
Address :

Signed by the said
in the presence of
Witness

Contractor

Name :
Address :
Date:

IV. GENERAL CONDITIONS OF CONTRACT

1.0 DEFINITIONS AND INTERPRETATIONS

- 1.1 **Contract** means the documents forming the Tender and acceptance thereof and the formal Agreement executed between the Competent Authority on behalf of the Institute (IIMK) and the Contractor, together with documents referred to therein including these conditions, 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.
- 1.2 In the Contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-
- a) The "IIMK" or the "Institute", wherever mentioned, means **Indian Institute of Management Kozhikode**, or its authorized representative(s).
 - b) 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.
 - c) 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.
 - d) Architects shall mean the person for the time being or from time to time duly appointed by the Institute to act as 'Architect' for the purpose of the contract. In some part of the document, the word **Architect** shall also mean the said "Architect".
 - e) The Engineer-in-charge means the Engineer/Officer who shall supervise and be in-charge of the work on behalf of Institute/IIMK.
 - f) **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 tender to cover all overheads and profits.
 - g) **Schedule(s)** referred to in these conditions shall mean the relevant schedule(s) annexed to the tender with the amendments thereto issued up to the date of receipt of the tender.
 - h) **District Specifications** means the specifications followed by the State Government in the area where the work is to be executed.

- i) **Tendered value** means the value of the entire work as stipulated in the letter of award.
- j) **Date of commencement of work:** The date of commencement of work shall be the date of start as specified in the Tender or the first date of handing over of the site, whichever is later, in accordance with the phasing if any, as indicated in the tender document.
- k) **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 Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control.

2.0 ASSIGNMENT AND SUB-LETTING

2.1 Assignment

The contractor shall not assign the contract or any part thereof or any benefit or therein or there under without the written permission of the Institute.

2.2 Sub-letting

Please refer clause 2.9 of Special Conditions of Contract.

3.0 DRAWINGS

3.1 Issue of Drawings

Two set of drawings approved for construction will be issued to the contractor progressively during the contract period and the contractor shall arrange for the execution of the works and the procurements of materials accordingly.

3.2 Copies of Drawings to be kept at site

One copy of the drawings furnished to the contractor as aforesaid shall be kept at the site and the same shall at all reasonable times be available for inspection and use by the Institute/ Architect or their Representatives and by any other person authorized by the Institute / Architect in writing.

3.3 Issue of further drawings and instructions

The Institute shall supply to the contractor from time to time through his representative, during the progress of the works such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the contractor shall carry out and be bound by the same.

3.4 Ownership of Drawings

All drawings supplied to the contractor are deemed to be the property of the Institute. The contractor agrees both on behalf of himself and his employees, and sub-contractors, whether during or after completion of the contract not to divulge or use, except for the purpose of this contract, any information contained in the drawings.

3.5 Execution as per Drawings

The contractor must not vary or deviate from the drawings in any respect while executing the work or executing any extra work of any kind whatsoever unless advised by the Institute/ Architects.

3.6 Plans and drawings to be submitted by the Contractor.

The contractor shall submit the following information in triplicate to Institute for approval within the time stipulated against each item below:

- a) A general tentative layout plan of construction plant and equipment for the execution of work within the time period stipulated in schedule.
- b) Drawings or prints showing the location of major plants and other facilities which he proposes to put up at the site, including any changes in the general layout, at least 7 days prior to the commencement of the respective work.
- c) Layout and details of temporary works that the contractor wants to carry out to fulfill his obligation under the contract.

Within 7 days the Institute/Project Manager/Architect will give their approval/comments sufficient to proceed with the work or objections/instructions to the contractor based on which the drawings shall be revised and re-submitted for approval by the Institute/Architect.

All these plans and drawings submitted by the contractor and approved by the Institute/ Consultant shall become part of the contract.

3.7 Shop drawings

Wherever specified in the Contract, the Contractor shall furnish for the approval of the Architect. within fourteen days of the issue of the relevant information, two sets of shop drawings at his own cost, containing details of construction, size, co-ordinated arrangement as per other trades and site constraints, operating clearance, performance characteristics, Specification of all items of equipment accompanied by manufacturer's catalogues, and any other particulars desired by the Architect. In case of amendments or corrections to these drawings, the Contractor shall submit at his own cost two sets of the corrected drawings, along with the drawings on which the corrections were made. Upon approval of the shop drawings, the Contractor shall further submit at his own cost six sets of the approved shop drawings for the exclusive use of and retention by the Architect. No material or equipment may be delivered or installed at the Site, until the Contractor has in his possession the relevant approved shop drawings.

3.8 Completion Drawings and Maintenance Manuals

Upon virtual completion of the Works, the Contractor shall submit to the Institute comprehensive operating instructions and maintenance schedules, for all relevant items, elements and equipment. This shall be supplemented with but not substituted by manufacturer's manuals.

4.0 GENERAL OBLIGATIONS

4.1 Inspection of site etc. before submission of tender:

The contractor shall inspect and examine the site and its surroundings, and shall satisfy himself before submitting his tender, as to the nature of the ground, form and nature of the site, the quantities and nature of work and materials required for the completion of the works, the means of access to the site, the local labour conditions, the accommodation he may require and in general shall obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his tender.

4.2 Sufficiency of Tender

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 stated in the priced Bill of Quantities and the schedule of rates and prices, if any. The tender rates and prices shall cover all his obligations under the contract and all matters and things necessary, for the proper completion and maintenance of the work.

4.3 Clarification before submitting tenders

Should the contractor notice any discrepancy or error in the statement made, or quantities or units shown against items, he shall immediately bring to the notice of the authorities/Institute and obtain the clarification before submitting the tender. The tender shall be based on such clarifications received and shall be recorded as such in the covering letter to the tender, failing which the Institute shall have the right to ask the contractor to execute the work according to the statement made or quantities or units shown in the tender, without any compensation.

4.4 Rates quoted for finished work

The rates quoted in the tender by the contractor must be for the finished work as per the drawings and specifications.

4.5 Location of work

Unless specifically mentioned in the item, the work described therein may be at any location or elevation inside the Institute's campus. Where there is no road approach, the Contractor may have to transport the materials by head load.

4.6 The tender shall remain open for acceptance for a period of 90 days from the date of opening of the tender.

4.7 Commencement of work:

The contractor shall commence the work at site immediately on being advised by the Institute of the acceptance of the tender and shall proceed with the same with due expedition.

4.8 Programme of work

Soon after the award of contract, the Contractor shall submit to the Institute for his approval a programme to match with the planned completion of the whole job showing the order of preference and method in which he proposes to carry out the works and shall whenever required by the Institute representative furnish further detailed programme and particulars in writing of

the contractor's arrangements for carrying out the works and of the construction plant and temporary works which the contractor intends to supply, use or construct as the case may be. The submission to and approval, if any, by the Institute or his representative of such programmes or particulars shall not relieve the contractor of any of his duties or responsibilities under the contract.

4.9 Contractors' Employees

The contractor shall provide and employ at site in connection with the execution and maintenance works:

- a) Only such technical assistants as are skilled and experienced in their respective callings and such sub-agents, foreman and leading hands as are competent to give proper supervision to the work they are required to supervise and,
- b) The following technical personnel shall also be employed by the contractor.

Si. No.	Cost of work executed	Number of persons to be employed
i	For work costing more than Rs. 10.00 Lakhs for Civil works, Rs. 5.00 Lakhs for Ele./Mech. Works.	Graduate Engineer or a Retired A.E. from the Govt. Dept. possessing at least recognized diploma in the discipline.
ii	More than Rs. 5.00 Lakhs but less than Rs. 10.00 lakhs – Civil works. More than Rs. 1.00 Lakhs but less than Rs. 5.00 Lakhs for Ele. /Mech. Works.	Recognized diploma holder in the discipline.
Recovery would be affected from the contractor if the provisions are not fulfilled at Rs. 25,000/- per month for Graduates & Rs. 20,000/- per month for Diploma holders.		

- c) Such skilled, semi-skilled and un-skilled labour as is necessary for the proper and timely execution and maintenance of works.

4.10 Removal of Workmen

The Institute shall be at liberty to object to and require the contractor to remove forthwith from the works any person employed by the Contractor in or about the execution or maintenance of the works who in the opinion of the Institute misconducts himself or is incompetent or negligent in proper performance of his duties or whose employment is otherwise considered by the Institute to be undesirable and such person shall not again be employed upon the works without the written permission of the Institute. Any person so removed from the works shall be replaced by the contractor without delay by a competent substitute as approved by the Institute. Misconduct of employee of the contractor or poor workmanship shall be a valid reason for suspension of the contract by the Institute and in that case, no compensation of whatsoever nature shall be paid to the contractor.

4.11 Communications to be in writing

All references, communications, correspondences made by the Institute, and their representative or the contractor concerning the works shall be in writing and no reference, communication, or complaint which is not in writing, shall be recognized.

4.12 Occupation and use of land

No land/building belonging to or in the possession of the Institute shall be occupied by the contractor. The contractor shall not use, or allow to be used, the site for any purpose other than for executing the works.

4.13 Fossils/Coins, etc.

All fossils, coins, articles of value of antiquity and structures and other remains or things or geological or archaeological interest discovered on the site of the works shall be the absolute property of the Institute. The contractor shall not take away any such article or thing and take reasonable precautions to prevent his workmen or any other person from removing or damaging such article or thing and shall immediately upon discovery thereof acquaint the Institute's representative of such discovery and carry out order as to the disposal of the same.

4.14 Construction of site shed

Any site shed, proposed to be temporarily constructed by the contractor for his office work, storage of materials etc. shall conform to the standard sketch, or to the plan approved by the Institute. Permission for the construction of such shed shall be obtained in writing.

4.15 Materials, tools and plant

All materials required for the execution of the works other than those mentioned in the Notice Inviting Tender shall be supplied by the contractor. Materials so supplied shall have the approval of the Institute before using on the works. All the rejected materials shall be removed at once from the site of work at the contractors' own cost. The contractor shall supply all tools, tackles, and equipments like compressors, concrete mixers, batching plant vibrators, pumps, welding or pneumatic tools, tar boilers etc. required for the execution of the works.

4.16 Tollages etc.

The contractor shall pay all tollages and other royalties, rent and other payments or compensations, if any, for getting stone, gravel, sand, clay and all other materials required for the works.

4.17 Setting out

The contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions, and alignment of all parts of the works and for the provision of all necessary instruments, appliances, and labour in connection there with. If at any time during the progress of the works any error shall appear or arise in the position, level, dimensions or alignment of any part of the works, the contractor on being required to do so by the Institute or his representative, shall at his own cost rectify such error to the satisfaction of the Institute or his representative. The checking of any setting out or of any line or level by the

Institute or his representative shall not in any way relieve the contractor of his responsibility for the correctness thereof. The contractor shall provide all necessary instruments, appliances, and labour required by the Institute or his representative for checking, if any, of the setting out. The contractor shall carefully protect and preserve all bench marks, site levels, pegs and other things used in setting out the works. The rates quoted for the work shall also include the cost of all reference and level pillars and their dismantling when no longer required.

4.18 Damage to persons and property

The contractor shall indemnify and keep indemnified the Institute against all losses and claims for injuries or damages to any person or property whatsoever which may arise out of or in consequence of the construction and maintenance of works and against all claims, demands, proceedings, damages, costs, charges, expenses, whatsoever in respect thereof or in relation thereto.

4.19 Interference with Traffic and Adjoining Properties

All operations necessary for the execution of the works shall, so far as compliance with the requirements of the contract permits, be carried on so as not to interfere unnecessarily or improperly with the public convenience or the access to use and occupation of public or private roads and footpaths or of properties whether in the possession of the Institute or of any other person. The contractor shall save harmless and indemnify the Institute in respect of all claims, proceedings, damages, cost, charges and expenses whatsoever arising out of, or in relation to, any such matters in so far as the contractor is responsible therefore.

4.20 Extraordinary Traffic

The contractor shall use every reasonable means to prevent any of the highways or bridges communicating with or on the route to site from being damaged or injured by any traffic of the contractor or any of his sub-contractors and in particular, shall select routes choose and use vehicle and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of plant and material from and to the site shall be limited, as far reasonably possible, and so that no unnecessary damage or injury may be occasioned to such highways and bridges.

4.21 Co-operation with other Agencies

The contractor shall co-operate with the work of other agencies or contractors that may be employed or engaged by the Institute and as far as it relates to the contractors' work. The sequence of work shall be so arranged that the work of other agencies are also in progress simultaneously.

4.22 Barricading around excavated trenches etc.

The contractor shall at his own cost provide around excavation, temporary barricading with ballies and bamboos with warning signals during day and night and shall maintain it so long the trenches are not filled up. Similar barricades shall also be provided at all dismantling work, erection of structural, sheeting work etc. No extra claim shall be entertained for providing, maintaining and removing such barricades.

4.23 Protection of underground services

The contractor must take all precautionary measures to protect the underground and other services lines, viz. cables, water and sewer lines etc. and observe any specific instructions which may be given in this regard by the Institute.

4.24 De-watering trenches and pits

The tendered rates shall always be deemed to have taken into account the cost of removal of silt and materials that may slip in the trench and pit and de-watering the trenches or pits of water accumulated or collected through seepage or subsoil water or rain water. The contractor shall in no case be entitled to claim any extra amount for the above work. The contractor shall remain prepared with necessary pumps and equipment for de-watering the trenches or pits so as to avoid unnecessary delay and possible damage to the property etc.

4.25 Work in or around operating plant or offices etc.

Where the work is being carried out in or around an operating plant where the plant must run un-interrupted, the contractor shall work only at specified places and times as mutually arranged between the contractor and the Institute. Similar arrangement must be made while executing works inside the offices, buildings etc. without causing disturbance to the office work. For this the work may be required to be done during off-hours and Sundays. No extra will be allowed beyond the rates quoted for doing work in the manner described above.

4.26 Work in shifts and off-days

The contractor shall work in one or more shifts as also on Sundays and off days to complete the work in time, if so required for which the Institute shall not be liable to pay any extra.

4.27 Site Order Book

A site order book must be maintained and always be available at site to record the instructions by the Institute or his representative. The contractor must see that the instructions noted therein are properly carried out.

4.28 Delay in obtaining materials supplied by the Institute

If the Institute has undertaken to supply any material specified in the special conditions at rates and conditions cited therein, the contractor shall keep himself in touch with day to day position regarding the supply of materials from the Institute and so adjust the progress of the works that labour may not remain idle nor there be any other claim due to or arising from delay in obtaining the materials.

4.29 Record of materials supplied by the Institute

The contractor shall maintain an account of different materials obtained from the Institute for executing the works under the contract. The Institute shall

have the power to check the position of materials at all times and verify stocks as and when desired.

4.30 Safe storage of materials

The contractor shall be responsible for the safe storage of materials supplied by the Institute for execution of the works. Surplus materials or materials lost or damaged or un-accounted for or made unserviceable by the contractor shall be charged at the prevailing market price.

4.31 Cement Godown

Cement godown shall be provided by the contractor including dismantling on completion of the project and removing from site all the debris.

4.32 Transport of materials

Unless otherwise specified, all the materials supplied by the Institute shall be transported by the contractor from the Institutes' store/yard, to the site of work at no extra cost.

4.33 Site to be kept clear

The surplus spoil and dismantled debris shall be removed to a place as directed by the Institute and stacked, leveled and dressed as directed.

4.34 Assistance and Instruments for Engineer-in - Charge's Representative

The contractor shall provide at all times for the duration of the contract, chain-men, staff-men, workmen and survey instruments for the exclusive use of the site Engineer as may be deemed necessary for carrying out his duties in connection with the contract.

4.35 Site Notice Board

The contractor shall provide for all necessary site notice boards as required by the Institute/Architect to display the project name, the Institute name and the names of all Architects associated with the work.

4.36 General Lighting for the work and accommodation for site staff

The contractor shall provide electric lights, maintain system all as required for the works and remove the temporary installations on completion.

4.37 Conflict in meaning between schedule of rates and specifications

The Bill of Quantities shall be read in conjunction with the specifications, and in the event of conflict in meaning between the two, the corresponding item in the schedule shall always have precedence over the specifications.

4.38 Conflict in meaning between general conditions of contract and the terms and conditions

In case of any inconsistency between the General conditions of contract and the special conditions, the special conditions of contract shall have precedence over the General Conditions.

5.0 LABOUR

5.1 Labour Rules

In respect of all labour directly or indirectly employed on the works by the contractor, the contractor shall comply with the provisions of the contract labour (Regulation and Abolition) Act 1970, Minimum Wages Act 1948, Payment of Wages Act 1936 and any amendments thereof and all legislations and rules of the State and/or Central Government or other local authority, framed from time to time, governing the protection of health, sanitary arrangements, wages, welfare and safety for labour employed on building and construction works and for bonus, retirement benefits, retrenchment/lay off, compensation and all other matters involving liabilities of Institutes to employees. The rules and the other statutory obligations with regard to fair wages, welfare and safety measures, maintenance of register etc. will be deemed to be part of the contractors obligation under the contract.

5.2 Reporting accident of labour

The contractor shall be responsible for the safety of all employees and/or workers employed or engaged by him on and in connection with the works and shall forthwith report all cases of accidents to any of them, however caused and whenever occurring to the authorities concerned required as per law and to the Institute/Architects or his representative and shall make every arrangement to render all possible assistance and aid to the victim of the accident.

5.3 Provision of workmen's compensation act

The contractor shall at all times indemnify and keep indemnified the Institute against all claims for compensation under the provisions of the workmen's compensation act 1923 or any other law for the time being in force in respect of any workmen employed by the contractor in carrying out the contract and against all costs and expenses or penalties incurred by the Institute in connection there with. In every case in which, by virtue of the provisions of the said act, the Institute is obliged to pay compensation to workmen employed by the contractor in executing the works, the Institute shall recover from the contractor the amount of the compensation so paid and without prejudice to the rights of the Institute under the said act, the Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any dues by the Institute to the contractor, whether under this contract or otherwise without prejudice to any other remedy that may be available to the Institute in law. The Institute shall not be bound to contest any claim made against it under the said Act, except on the written request of the contractor and upon his giving to the Institute full security for all costs for which the Institute might become liable in consequence of contesting such claim.

5.4 Accident or injury to workmen

The Institute shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or his sub-contractors, and the contractor shall indemnify and keep indemnified

the Institute against all such damages and compensation and against all claims, demands, proceedings costs, charges and expenses whatsoever in respect thereof or in relation thereto.

5.5 Safety, Health and Welfare of work people

The contractor shall be responsible for providing for all costs and charges incurred by complying with all safety health and welfare regulations, appertaining to staff and work people employed on the site including those employed by the sub-contractors including registration with the labour department of Government. The contractor shall be responsible for and shall allow for providing medical facilities including emergency medical facilities for his staff.

5.6 Crèches

At every work place, at which women workers are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom.

The rooms shall be built in consultation with Institute / Architect to reasonably good specifications and be of appropriate sizes conducive to comfort of the children. The rooms shall be provided with sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. The Contractor shall supply adequate number of toys and games in the playroom and sufficient number of cots and bedding in the bedroom. The Contractor shall provide one maid to look after the children in the crèche when the number of women workers does not exceed 50 and two maids when the number of women workers exceeds 50. The use of the rooms earmarked as crèche shall be restricted to children, their attendants and mothers of the children.

5.7 Provision of mines Act

The contractor shall observe and perform all the provisions of the Mines Act 1952 where applicable or any statutory modifications thereof and shall indemnify and keep indemnified the Institute from and against any claim under the said Act.

5.8 Preservation of peace

The contractor shall take requisite precautions to prevent any riotous or unlawful behavior by or amongst his workmen and/or others employed on the works by him, for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the works.

5.9 Age limit of labour

The age limit for employment of labour shall be in strict accordance with the existing labour legislation's.

5.10 Return of labour employed

The contractor, if required by the Institute/Architect, shall submit return in detail in such form and at such interval as the Architect may prescribe

showing number of different classes of labour employed on the works from time to time by the contractor.

5.11 Observance by sub-contractors

The contractor shall be responsible for the observance of the provisions of aforesaid Clauses by the sub-contractors' employed by him in the execution of the contract.

6.0 MATERIAL TESTS AND WORKMANSHIP:

6.1 Quality of materials, workmanship and tests

All materials and workmanship shall be of the respective kinds described in the contract and in accordance with the Institute/ Architect or their representative's instructions and shall be subjected from time to time to such tests as the Architect or his representative may direct at the place of manufacturer or fabrication or on the site at all or any of such places. The contractor shall provide such assistance instruments, machines, labour and materials, as are normally required for examining measuring, and testing any work and the quality, weight or quantity of any material used and shall supply samples of materials before incorporation in the works for approval as may be required by the Institute/ Architect or their representative.

Contractor shall arrange for Compression testing machine at site for testing of concrete cubes/bricks etc. However this provision does not prevent the Institute for getting the testing done from outside at contractor's expense.

6.2 Construction of prototypes or samples of work

The contractor shall construct prototypes or samples of work as laid down in the contract or as instructed by the Institute/ Architect. Such prototypes or samples of work, after approval by the Institute/ Architect shall serve as the standards to be achieved in the final construction.

6.3 Cost of samples

All samples shall be supplied by the contractor at his own cost.

6.4 Cost of tests

The cost of making any test as per specifications shall be borne by the contractor and contractor should arrange for all requirements like cubes etc. to take the samples by Institute/ Architect.

6.5 Inspection of operation

The Institute/ Architect or their representative or any person authorized by them shall at all times have access to the works and to the site and to all workshops and places where work is being prepared or where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility for and every assistance in or in obtaining the right to such access.

6.6 Examination of work before covering up

No work shall be covered up or put out of view without the approval of the Institute/ Architect or their representative and the contractor shall afford full opportunity to the Institute/ Architect or their representative to examine and

measure any work which is about to be covered up or put out of view and to examine that work before permanent work is placed thereon. The contractor shall give due notice to the Institute's/ Architect's representative wherever any such work(s) is or are ready or about to be ready for examination and the Institute's/ Architect's representative shall without unreasonable delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such work or of examining such works.

6.7 Uncovering and making openings

The Contractor shall uncover any part or parts of the works or make openings in or through the same as the Institute/ Architect may from time to time direct and shall reinstate and make good such part or parts to the satisfaction of the Institute/ Architect. If any such part or parts have been covered up or put out of view after compliance with the requirements of Clause 6.5 hereof and are found to be executed in accordance with the contract the expenses of uncovering making openings in or through, reinstating and making good the same shall be borne by the Institute. But in any other case all such expenses shall be borne by the contractor and shall be recoverable from him by the Institute and deducted by the Institute from any moneys due or which may become due to the contractor, without prejudice to any other remedy that may be available to the Institute in law.

6.8 Removal of improper work and materials

The Institute/ Architect or their representative shall during the progress of the works have power to order in writing from time to time.

- a) The removal from the site within such time or times as may be specified in the order of any material which in the opinion of the Institute/ Architect or his representative is not in accordance with the contract.
- b) The substitution of proper and suitable materials.
- d) The removal and proper re-execution (notwithstanding a previous test thereof or interim payment therefore) of a work which in respect of materials or workmanship is not, in the opinion of the Institute/ Architect or their representative, in accordance with the contract.

6.9 Suspension of work

The contractor shall, on the written order of the Institute/ Architect suspend the progress of the works or any part thereof for such time and in such manner as the Institute/Architect may consider necessary and shall, during such suspension, properly protect and secure the work, so far as is necessary in the opinion of the Institute.

7.0 TIME OF COMPLETION, AND TAKINGOVER:

7.1 Possession of site

Save in so far the contract may prescribe the extent of portions of the site of which the contractor is to be given possession from time to time and the order in which such portions will be available to him and subject to any requirement

in the contract as to the order in which the work shall be executed, the Institute/Architect shall give to the contractor possession of so much of the site as may be required to enable the contractor to commence and proceed with the construction of the works in accordance with such reasonable proposals of the contractor as he will make in writing to the Institute/Architect and shall, from time to time as the work proceeds give the contractor possession of such further portions of the site as may be required to enable the contractor to proceed with construction of the works in accordance with the said programme or proposal.

7.2 Time of completion

The whole of the works shall be completed within the time stipulated or within such extended time as has been allowed under clause 7.3.

7.3 Extension of time of completion

Should the amount of extra or additional work of any kind or changes in scope of work or other special circumstances of any kind whatsoever which may occur, be such as fairly to justify the contractors' request for extension of time for the completion of the works the Institute / Architect shall determine and recommend the amount of such extension and the Institute shall sanction and intimate the contractor in writing. Provided that the Institute/ Architect is not bound to take into account any extra or additional work or other special circumstances unless the contractor has within 10 days, after such work has been commenced or such circumstances have arisen, submitted to the Institute/Architect full and detailed particulars of any request to the extension of time in the prescribed format of IIMK to which they may consider to be justified.

The contractor should seek extension of time of completion in the prescribed format of IIMK.

7.4 Extension of completion time due to strike, fire etc.

If in the opinion of the Institute/Architect the progress of the work has at any time been delayed by strikes, fire, inclement weather, un-avoidable casualties etc. beyond the control of the contractor, then the time of completion of the work may be extended for such reasonable time as the Institute/Architect may decide and this will be indicated in writing.

7.5 Work treated as complete (Virtual Completion)

When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, including fulfilling all obligations for electrical works governed "Special Conditions" for Electrical Works., the Contractor may give a notice to that effect to the Institute/ Architect, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. For the purpose of virtual completion, the Contractor should have completed all the formalities with the Electrical Inspectorate and got signed by the Institute the Application for Power Allocation, as may be applicable, and submitted the same to the Kerala State Electricity Board (K.S.E.B.). This does

not absolve the Contractor of his responsibility of undertaking the liaison work with K.S.E.B. for obtaining the power supply at the earliest. Such notice and undertaking shall be deemed to be a request by the Contractor for the Institute/Architect to issue a Virtual Completion Certificate in respect of the Works. The Institute / Architect will, within 21 days of the date of delivery of such notice, either issue to the Contractor with a copy to the Institute, a Virtual Completion Certificate stating the date on which, in his opinion, the Works including services were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all the work which, in the Institute's/Architect's opinion, is required to be done by the Contractor before the issue of such Certificate. The Institute / Architect shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Virtual Completion Certificate within 21 days of completion, to the satisfaction of the Institute/Architect, of the Works so specified and remedying any defects so notified.

The works shall not be treated as complete until,

- i) The site is clear from all materials, site shed etc. and the Institute/Architect are satisfied with the job done by the contractor.
- ii) The contractor has submitted the reconciliation statement regarding the stores if any received from the Institute and all the surplus and salvaged materials are returned to the Institute's stores, and the Institute has agreed to the same.
- iii) All equipment, tools, plants etc. taken from the Institute have been returned by the contractor.
- iv) Any other material, taken on loan/transfer from any other agency have been returned by the contractor.
- v) All power and water supply connections taken for the execution of the works have been disconnected by the contractor.
- vi) Rectifications of any damage done by the contractor to the work executed have been satisfactorily done by the contractor.

7.6 Virtual Completion of Sections or Parts and Taking over

Similarly, in accordance with the procedure set out in Sub-Clause 7.5 above, the Contractor may request and the Institute/Architect shall issue a Virtual Completion Certificate in respect of:

- a) any Section in respect of which a separate Time for Completion is provided in the Appendix to Tender, or
- b) any substantial part of the Permanent Works which has been both completed to the satisfaction of the Institute/Architect and, otherwise than as provided for in the Contract, occupied or used by the Institute.

After completion of substantial parts of the works before the completion of the whole of the works, the contractor shall notify the Institute/Architect in writing, who within 21 days of receipt of the said notice shall give such certificate with respect to any substantial parts of the works which has been completed to the satisfaction of the Institute/Architect and fit to be occupied or used by the Institute or refuse to issue the same stating the reasons thereof in writing. When any such certificate is given in respect of a parts of the works, such parts shall be considered as completed for the purpose of taking over and computation of the period of maintenance of such parts, that is, such period shall commence from the date of completion of such part of the works as certified. The works in whole or part shall not, however, be treated as completed for the purpose of other relevant Clauses hereof unless and until the provisions of Clause 7.5 hereof are fully complied with.

7.7 Maintenance

For a period of twelve months commencing immediately after virtual completion of the work by Contractor, the contractors' liability shall be to replace the defective parts, rectify/reconstruct the defective work that may develop of his own construction or those of his sub-contractors approved by the Institute (under clause 2.9 of Special Conditions of Contract) arising solely from faulty material or workmanship or for any other reason.

If it is necessary for the contractor to rectify/reconstruct any defective portions of the work under the contract, the provision of this condition shall apply to the portions of work so replaced or renewed until the expiration of three months from the date of such replacement or renewal or until the end of the above mentioned period of twelve months, whichever may be later. If any defects be not remedied within a reasonable time the Institute may proceed to do the work at Contractors' risk and expense, but without prejudice to any other rights which the Institute may have against the contractor in respect of such defects.

The contractor shall bear the cost of such repairs/rectifications carried out on his behalf at site. Immediately upon expiry of the maintenance period the Institute shall issue a final certificate indicating that the contractor has completed his obligation under the contract.

The decision of Institute/ Architect or their authorized representative's view regarding workmanship shall be binding on the Contractor and Contractor shall abide by the decision.

The deduction of expenditures for rectification shall be made from the Security Deposit/ Retention Money of the Contractor, in case Contractor does not attend the problem in a reasonable time.

8.0 TERMINATION OF CONTRACT:

8.1 Termination of contract

If the contractor has abandoned the contract or has failed to proceed with the work with due diligence or the progress on any particular item or items is slow or he has failed to execute the work in accordance with the terms and conditions of the contract, is persistently or flagrantly neglecting to carry out

his obligation under the contract, then it shall be lawful for the Institute to terminate the contract forthwith under written notice and to proceed with the balance of the work through any other agency/agencies. During the course of execution of the job, in case the contractor has done any substandard work, he shall be asked in writing to dismantle and re-do the same at his own expenses. If the contractor fails to comply with the above instructions immediately, then the Institute shall proceed with the above rectification work, through another agency or agencies. Similarly, if the contractor goes slow on any particular item or items of work, the Institute shall have the right to execute this item or items through another agency or agencies, including through its own department at the cost and risk of the Contractor.

8.2 Back charging the contractor

Extra cost and expenses incurred for completing the work or balance work or carrying out the rectification of any work as mentioned above through another agency or agencies including its own department shall be debited to contractors' account and shall be recovered from any money due or that may become due to the contractor without prejudice to any other remedy that may be available to the Institute in law.

9.0 ALTERATIONS, ADDITIONS, AND OMISSIONS:

9.1 Variation:

The Institute/Architect shall be entitled to make any variation of the quality or quantity of the works or any part thereof that may, in his opinion, be necessary and for that purpose, or for any other reason if it shall, in his opinion be desirable, he shall have power to order the contractor to do and the contractor shall do any of the following:

- a) Increase or decrease the quantity of any work included in the contract.
- b) Omit any such work.
- c) Change the character or quality or kind of any such work.
- d) Change the levels, lines, position and dimensions of any part of the works and,
- e) Execute additional work of any kind necessary for the completion of the works.

No such variation shall in any way vitiate or invalidate the contract but the value, if any, of all such variations shall be taken into account in ascertaining the amount of the Contract Price.

9.2 Order for variations to be in writing

No such variation shall be made by the contractor without an order in writing of the Institute/Architect, provided that no order in writing shall be required for increase or decrease in the quantity of any item of work where such increase or decrease is the result of the actual quantities exceeding or being less than those stated in the Bill of Quantities which are estimates. In such cases, the contractor shall be paid only for the actual quantity of work done as certified by the Institute/Project Manager/Consultant at the accepted unit item rates and no compensation shall be allowed. Provided also that if for any reason

the Institute/Project Manager/Consultant shall consider it desirable to give any such order verbally, the contractor shall comply with such order but it must be followed by confirmation in writing of such verbal order given by the Institute/Project Manager/Consultant, which shall be deemed to be an order in writing within the meaning of this Clause.

9.3 Extra Items

Refer clause from 1.29 to 1.29.2 of Notice Inviting Tender (NIT).

9.4 Items of Ad-hoc nature

The contractor shall procure necessary materials and carry out miscellaneous work of ad hoc nature not specifically provided in the agreement with necessary tools and tackles as may arise during execution of the contract. The actual quantum of work shall be certified and settled by the Institute/Architect and payment for the same shall be fixed on the basis of actual cost plus 15% towards overheads, profits and establishments.

9.5 Claims

The contractor shall send to the Institute's /Architect's representative an account, giving full and detailed particulars with proper analysis, of all claims for any additional expense to which the contractor may consider himself entitled and of all extra items of work ordered by the Institute/Architect, which he has executed, within one month of execution of such work, and no claim for payment for any such work will be considered which has not been included in such particulars. Provided always that the Institute/Architect shall be entitled to authorize payment to be made for any such work notwithstanding the contractors' failure to comply with this condition, if the contractor has at the earliest practicable opportunity notified the Institute/Architect in writing that he intends to make a claim for such work.

10.0 MEASUREMENTS:

10.1 Quantities

The quantities set out in the Schedule of Quantities are the estimated quantities of the work. These are not to be taken as the actual and correct quantities of the works, to be executed by the contractor in fulfillment of his obligation under the contract.

10.2 Works to be measured

The Institute/Architect shall, except as otherwise stated, ascertain and determine by measurement the value in terms of the contract. He shall when he requires any part or parts of the works to be measured, give notice to the contractors' authorized agent or representative, who shall forthwith attend or send a qualified agent to assist the Institute/Architect or his representative in making such measurement, and shall furnish all particulars required by either of them. Should the contractor not attend or neglect or omit to send such agent, then the measurement made by the Institute/Architect or approved by him, shall be taken to be the correct measurement of the work. If the contractor does not so attend to examine and agree such records and

drawings they shall be taken to be correct. If, after examination of such records and drawings, the contractor does not agree to the same or does not sign the same as agreed, these shall nevertheless be taken to be correct, unless the contractor shall, within fourteen days of such examination, lodge with the Institute/Architect's representative for decision by the Institute/Architect, notice in writing of the respects in which such records and drawings are claimed by him to be incorrect.

10.3 Method of measurement

The works shall be measured net in accordance to IS: 1200 (all parts), notwithstanding any general or local custom, except where otherwise specifically described or prescribed in the contract and subject to the following:-

(a) Excavation

Footing: Area of Excavation for footing shall be measured equal to the area of the lowest concrete course as shown on the drawing. Depth shall be measured vertically from ground level to bottom of concrete course or dry rubble packing as the case may be.

Plinth beams: Depth of excavation for plinth beam shall be measured from ground level up to bottom of beam and width equal to width of beam. If a leveling course is ordered, it shall be measured up to the bottom of the leveling course.

Where excavation is made in trenches, measurement for cutting shall be by means of tape and staff and the width of concrete or rubble packing as shown on the drawing shall be considered as width of excavation.

Where excavation is made for leveling site, levels shall be taken before start and after completion of work and total quantity of excavation computed from these levels. Where soil including soft rock and hard rock are mixed, hard rock after excavation shall be stacked separately. Measurement of the entire excavation shall be taken as indicated above. Excavation of hard rock shall be measured from stacks of excavated hard rock and reduced by 50% for bulking and voids. The quantity so arrived at shall be paid for under hard rock. The difference between the quantity of entire excavation and quantity payable under hard rock shall be paid as soil including soft rock.

(b) Earth filling

In open spaces: Filling shall be measured from cross sections of embankments levels of which are recorded by means of levels before start of work and after completion of work. When it is not possible to measure filling from cross sections, it may be measured from loose stacks or lorry measurement with prior written permission from the Engineer-in-charge and 20% deduction shall be made from the measured quantity to arrive at the net quantity payable.

(c) Cement concrete (Plain & Reinforced)

Cement concrete in PCC & RCC items shall be measured exclusive of plaster thickness but shall include hire charges of all equipment, curing, hacking and fair finish. Plaster shall be measured and paid separately.

Items like RCC precast Jali, RCC pipes and other such items which are normally manufactured in factories as well as those items which have been specifically mentioned in Schedule of Quantities shall be measured inclusive of reinforcement. No deduction will be made for openings upto 0.1 Sq.m and no extra labour for forming such openings or voids shall be paid.

Columns shall be measured from the top of the footing and shall be measured through, including flare of the column in case of flat slab construction.

Beams shall be measured from face to face of columns/beams and shall include haunches if any. The depth of the beam shall be measured from the bottom of the slab to bottom of the beam.

In case of combined footings with connecting beams or strap beam the exposed portion of beam rib shall be measured as beam and the remaining portion measured in footing.

(d) Reinforcement

Shall be measured on standard weight basis for steel actually placed in position. Wastage and binding wire shall not be measured. Authorized overlaps and spacers shall only be measured. No rolling margin will be allowed.

(e) Brick works

Except walls of half-brick thickness or less, all brick work shall be measured in Cubic metre. Walls of half brick thickness or less shall each be measured separately and given in sq. metre stating the thickness.

Thickness of wall

Brick walls up to and including three bricks in thickness shall be measured in multiples of half brick which shall be deemed to be inclusive of the mortar joints. Where fractions of half-brick occur due to architectural or other reasons, the measurement shall be taken as full half-brick. For walling, which is more than three bricks in thickness, the actual thickness of wall shall be measured to the nearest centimeter.

Honeycomb brick walling shall be given in sq.m stating the thickness of wall and the pattern of honey-combing. Honeycomb opening shall not be deducted.

Deductions

No deductions or additions shall be made on any account for ends of dissimilar materials (i.e. joists, beams, lintels, lofts, girders, rafters, purlins, trusses, corbels, steps etc.) up to 500 sq.cms. in section Openings up to 0.1 sq.m in section

Wall plates, bed plates and bearing of slabs, chajjas and the like where the thickness does not exceed 10 cms. and the bearings do not extend over the full width of the wall.

(f) Plastering and pointing

All plastering and pointing work shall be measured in sq. metre unless otherwise described. Net area of surfaces plastered shall be measured. No deductions will be made for ends of joists, beams, posts etc. and openings not exceeding 0.50 sq.m each and no addition shall be made for reveals, jambs, soffits, sills etc. of these opening nor for finishing the plaster around openings, ends of joists, beams and posts etc.

The following multiplying factors for obtaining equivalent areas shall be adopted:

Sl. No.	Description of Work	How measured	Multiplying factor
1.	Paneled, framed, ledged, braced and battened.	Measured flat (not girthed) including frame, edges, chocks, cleats etc. shall be deemed to be included in the item.	11/8 (for each side)
2.	Flush, part paneled & glazed or gauged	-- do --	1 (for each side)
3.	Fully glazed or gauged or glazed louvered ventilators	-- do --	-- do --
4.	Fully venetioned or louvered (not with glazing)	-- do --	-- do --
5.	Weather boarding	Measured flat (not girthed) supporting frame work shall not be measured separately.	11/8 (for each side)
6.	Trellis (or Jaffri) work one way or two way.	Measured flat overall shall be made for opening (supporting members shall not be measured separately).	1 (for each face)
7.	Guard bars, balustrades, gratings, grilles, railing, grille doors, grille partitions, etc.	Measured flat overall, no deduction shall be made for opening. (Supporting members shall not be measured separately).	1 (for painting all over)

Sl. No.	Description of Work	How measured	Multiplying factor
8.	Gates and open palisade fencing including standards, braces, rails, stays etc.	See note below	1 (for painting all over)
9.	Carved or enriched work	Measured flat	2 (for each side)
10.	Steel rolling/alligator type shutters	Measured flat over jamb, guides, bottom rails and locking arrangements etc. shall be deemed to be included in the item.	1 1/4 (for each side)
11.	Fully glazed or gauged steel windows or partitions	Measured flat	1 1/4 (for each side)

Measurements shall be given for the surplus earth for the net quantity deducting the quantities for site filling, basement filling, back-filling etc. from the quantity of earthwork excavation and cutting.

Note: The height shall be taken from the bottom of the lowest rail, if the palisades do not get below it (or from the lower end of palisades, if they project below the lowest rail) up to the top of palisades, but not up to the top of standards, if they are higher than the palisades. Similarly for gates depth of roller shall not be considered while measuring the height.

Provisional sums

"Provisional Sum" means a sum included in the contract and so designated in the Bill of Quantities for execution of works or the supply of goods, material or services or for contingencies, which sum may be used, in whole, or in part or not at all, at the direction or discretion of the Institute. The contract price shall include only such amounts in respect of the work, supply or services to which provisional sums relate as the Institute shall approve or determine.

The contractor shall when required by the Institute, produce all quotations, invoices, vouchers, and accounts or receipts in connection with expenditure in respect of provisional sums.

10.4 SETTLEMENT OF DISPUTES:

Matter to be settled by Institute

[All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the works or after their completion shall be referred by the contractor to the Institute and the Institute shall within a reasonable time after their presentation make and notify decisions thereon in writing.

The decisions, directions, clarifications etc. with respect to measurements, drawings and certificates with respect to any matter the decision for which is

specially provided for by these or other special conditions to be given and made by the Institute are matters which are referred to hereinafter as **Excepted** matters and shall be final and binding upon the contractor and shall not be set aside on account of non-observance of any formality, any omission delay or error in proceeding in or about the same or on any other ground or for any reason and shall be without Appeal.

[
In the event of any dispute or difference between the parties hereto as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question, dispute or difference on any account or as to the withholding by the Institute of any certificate to which the contractor may claim to be entitled to or if the Institute fails to make a decision within a reasonable time, then and in any such case, but except in any of the **Excepted** matters referred to in the above clause, the contractor after 90 days of his presenting his final claim on the disputed matters, may demand in writing that the dispute or difference be referred to arbitration. Such demand for arbitration shall specify the matters which are in question, dispute or difference, and only such dispute or difference other than **Excepted** Matters of which the demand has been made and no other dispute or difference shall be referred to the arbitration of an officer to be nominated by the consent of both the parties and the provisions of the Indian Arbitration Act 1996, for the time being in force or of any other Act of the Legislature passed in substitution thereof or modification thereof and for the time being in force shall apply to such arbitration.

10.5 Arbitration

The contractor shall not, except with the consent in writing of the Institute/ Project Manager or the Consultant, in any way delay the carrying out of the work by reason of any such matter, question or dispute being referred to arbitration but shall proceed with the work with all due diligence and shall, until the decision of the arbitration is given, abide by the decision of the Institute and no award of the arbitrator shall relieve the contractor of his obligation to adhere strictly to the Institute's instructions with regard to the actual carrying out of the work except as specifically affected by such award.

10.6 NOTICES:

Service of notice on contractor

All certificates, notices or written orders to be given by the Institute to the Contractor under the terms of the contract shall be served by sending by Registered Post or delivering the same to the contractor's place of business or such other address as the contractor shall nominate for this purpose.

Service of notice on Institute

All notices to be given to the Institute under the terms of the contract shall be served by sending by post or delivering the same to the Institutes' address.

V. SPECIAL CONDITIONS OF CONTRACT

1 SPECIAL CONDITIONS

- The contractor shall execute the whole work in the most substantial and workman like manner in strict accordance with the specifications, approved design, drawings particular specifications, special conditions, additional conditions and instructions of the Engineer-in-charge.
- Before tendering, the contractor shall inspect the site of work and shall fully acquire himself about the conditions prevailing at site, availability of materials , availability of land and suitable location for construction of go-downs, stores, and camp, transport facilities, the extent of leads and lifts involved in execution of work.
- The Contractor shall at his own expense and risk arrange land for accommodation of labour, setting up of office, storage of materials, erection of temporary workshops, and construction of approach roads to the site of work, including land required for carrying out of all jobs connected with the completion of the work. However, the departmental land to the extent available may be allowed to be used for these purposes free of rent without accepting any responsibility for the delay, if any, on this account. The Contractor shall have to abide by the regulations of authorities concerned and the directions of the Engineer- in- charge for use of land available at the site of work. If it becomes necessary during constructions to remove or shift this stored materials, shed, workshop excess roads, etc. to facilitate execution of the work included in this agreement or any other work by any other agency, the contractor shall remove or shift this facilities and directed by the Engineer-in- Charge and no claim whatsoever shall be entertained on this account.
- It shall be deemed that the contractor has satisfied himself as to the nature and location of the work, transport facilities, availability of the land for setting up of camp, etc.
- The Institute will bear no responsibility for lack of such knowledge and the consequences thereof. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of work s by the Engineer-in-Charge. Nothing extra shall be paid on this account.
- The Contractor shall carry out true and proper setting out of the work in co-ordination with the Engineer-in-Charge or his authorized representatives and shall be responsible for the correctness of the positions, levels, dimensions and alignments of all parts of the structure. If at any time during the progress of the work any error appears or arises in the position, level, dimensions or and alignments of any part of the work, the Contractor on being asked to do so by the Engineer-in-Charge, shall rectify such error to the entire satisfaction of Engineer-in-Charge, shall rectify such error to the entire satisfaction of Engineer-in-Charge. The checking by the Engineer-in-Charge or his

authorized representatives shall not relieve the Contractor of his responsibility for the correctness of any setting out of any line or level. The Contractor shall carefully protect and preserve all bench marks, pegs and pillars provided for setting out of works.

- All setting out activities concerning establishment of bench marks, Theodolite stations, Centre line pillars, etc. including all materials, tools, plants, equipment, Theodolite and all other instruments, labour, etc. required for performing all the functions necessary and ancillary thereto at the commencement of the work, during the progress of the work and till the completion of the work shall be carried out by the contractor and nothing extra shall be paid on this account.
- The Contractor shall at his own cost submit samples of all materials sufficiently in advance and obtain approval of Engineer-in-Charge. The materials to be used in actual execution of the work shall strictly conform to the quality of samples approved by the Engineer-in-Charge and nothing extra shall be paid on this account. The acceptance of any sample or material on inspection shall not be a bar to its subsequent rejection, if found defective.
- The Contractor shall at his cost, make all arrangements and shall provide necessary facilities as the Engineer-in-Charge may require for collecting, preparing, packing, forwarding and transportation of the required number of samples for tests and for analysis at such time and to such places as directed by the Engineer-in-Charge. Nothing extra shall be paid for the above operations including the cost of materials required for tests and analysis. Testing charges, if any, will be borne by the Institute if the test passes. In case it fails, the same shall be borne by the contractor.
- The necessary tests shall be conducted in the laboratory approved by the Engineer-in-Charge. The samples for carrying out all or any of the tests shall be collected by the Engineer-in-Charge or on his behalf by any other officer of the Institute. The Contractor or his authorized representative shall associate himself in collection, preparation, packing and forwarding of such samples for the prescribed tests and analysis. In case the Contractor or his authorized representative is not present or does not associate him in the aforesaid operation the result of such test consequence thereon shall be binding on the contractor.
- Materials used on work without prior inspection and testing (where testing is necessary) and without approval of the Engineer-in-Charge are liable to be considered unauthorized, defective and not acceptable. The Engineer-in-charge shall have full powers to require the removal of any or all of the materials brought to site by Contractor which are not in accordance with the Contract Specifications or do not conform, in character or quality to the samples approved by the Engineer-in-Charge. In case of default on the part of the Contractor in removing rejected materials, the Engineer- in- Charge shall be at liberty to have them removed at the risk and cost of the Contractor.

- The Contractor shall make this all arrangements of water required for execution of work and get the water tested at his own cost with regard to its suitability for use in the works and get written approval from the Engineer-in-Charge before he proceeds with the use of same for execution of work.
- The work shall be carried out in such a manner so as not to interfere or adversely affect or disturb other works being executed other agencies, if any.
- Any damage done by the Contractor to any existing works or work being executed by other agencies shall be made good by him at his own cost.
- The work shall be carried out in the manner complying in all respect with the requirement of relevant rules and regulations of the local bodies under the jurisdiction on which the work is to be executed and nothing extra shall be paid on this account.
- For completing the work in time, the Contractor may have to work In two or more shifts and no claims whatsoever shall be entertained on this account, notwithstanding the fact that the Contractor will have to pay to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and/ or extra amount for any other reasons.
- The contractor will have to make his own arrangement for obtaining Electricity connection from the State Electricity Board and make necessary payment directly to the Department concerned and / or install generators at the site of work, if required and nothing extra whatsoever will be payable on this account.
- The Drawing for the work issued by the Engineer-in-Charge during execution of work shall at all times be properly correlated before executing any work and no claim what so ever shall be entertained for discrepancies in the drawings.
- The Contractor shall maintain in good condition all work executed till the completion of entire work entrusted to the Contractor under this contract.
- No payment shall be made to the contractor for damage caused by rain, whatsoever during the execution of works and any damage to the work on this account shall have to be made good by the contractor at his own cost.
- The rates for all items of work, unless clearly specified otherwise, shall include the cost of all labour, materials, de-watering required, if any, and other inputs involved in the execution of the items.
- Unless otherwise provided in the schedule of quantities, the rates tendered by the Contractor shall be all inclusive and shall apply to all heights, depths, leads and lifts, except for additional height in centering and shuttering over a height of 3.5m.
- No claim whatsoever for idle labour, additional establishments, costs of hire and labour charges for tools and plants etc. would be entertained under any circumstances.

- For the safety of all labour directly or indirectly employed in the work the Contractor shall, in addition to the provision of CPWD safety code and directions of the Engineer-in-Charge, make all arrangements to provide facility as per the provision of Indian Standard Specifications (codes) listed below & nothing extra shall be paid on this account.

- | | | |
|------|-----------------|--|
| i) | IS 3696 Part 1 | Safety Code for scaffolds and ladders. |
| ii) | IS 3696 Part II | Safety Code for scaffolds and ladders Part II |
| | | ladders. |
| iii) | IS 764 | Safety Code for excavation work. |
| iv) | IS 4138 | Safety Code for working in compressed air. |
| v) | IS 7293 | Safety Code for working with construction machinery. |
| vi) | IS 7969 | Safety Code for Storage and handling of Building materials |
| vii) | IS 4130 | Safety Code for demolition of buildings. |

- The Contractor shall take all precautions to avoid all accidents by exhibiting necessary caution boards and by providing red flags, red lights and barriers. The Contractor shall be responsible for any accident at the site of work and consequences thereof.
- Royalty if any payable and other incidental expenditure shall have to be paid by the Contractor on all the boulders, metal shingles, earth, sand bajri, etc. collected by him for the execution of the work, direct to the concerned Revenue Authority of the State or Central Govt. and the amount paid shall not be reimbursed in any form whatsoever.
- Other agencies working at site will also simultaneously execute the works entrusted to them and to facilitate their working, the contractor shall make necessary provisions eg. Holes, openings, etc. for laying/burying pipes, cables, conduits, clamps, hooks, etc. as may be required from time to time. The Contractor shall extend full co-operation to other agencies for smooth execution of works by other agencies. The final finishing of the work is to be executed in co-ordination with other agencies as directed by the Engineer-in-Charge.
- On account of Security considerations, there could be some restrictions on the working hours movement of vehicles for transportation of materials and location of labour camp. The contractor shall be bound to follow all such restrictions and adjust the programmes for execution of work accordingly. Nothing extra shall be paid on this account.
- Stacking of materials and excavated earth shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required shall have to be done by the Contractor at his own cost.

- In case of construction joints, the cost of applying cement slurry over the concrete surface before fresh concrete is laid as per para 5.4.4.4 of CPWD Specification 2009 is including relevant items of the schedule of quantities and nothing extra shall be paid on this account.
- Unless otherwise specified in the Schedule of Quantities the rates for all items of work shall be considered as inclusive of working in or under water and /or liquid mud and /or foul conditions including pumping or bailing out liquid mud or water accumulated in excavations during progress of the work from springs, tidal or river seepage, rain, broken water mains or drain and seepage from subsoil aquifer
- Water supply pipe lines shall not be embedded in floor. PVC pipe casing of next bigger diameters shall be provided in full width of wall (including finishing) when GI pipe line crosses the wall protects it from erosion. The gap between the PVC and GI pipes shall be sealed at the ends with poly-sulphide or other suitable sealant. Nothing extra shall be paid on this account.
- Stone slabs for risers and treads of staircases and steps, where specified, shall be of single piece of required width and length. No joint shall be permitted. The holes of required shape and size shall be drilled in the single piece stone slabs of treads for fixing balustrades wherever necessary. Pattern of stone slabs for landings of staircase shall be decided by the Engineer-in-Charge. Nothing extra is payable on this account.
- Stone slabs used for treads of staircase shall be provided with three machine cut grooves of size 3mm wide X 2mm deep, 25mm apart near the nosing of the steps. Nothing extra is payable to this account.
- To protect the flooring and steps of staircases during construction and until the completion of the work finished /semi- finished surface of flooring shall be covered with a thick layer of Plaster of Paris and this layer shall be maintained in good condition till its removal. The removal of the layer of Plaster of Paris and cleaning the surface shall be done as and when decided by the Engineer-in-Charge. After the removal of Plaster of Paris and cleaning of the surface, damage, if any, shall have to be made good by the contractor. No extra payment shall be made for protection with plaster of Paris, removal of plaster of Paris, cleaning and making good the damages.
- The contractor shall give a performance test of the entire installation (s) as per standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
- The steel work in railing includes fish tailing of the section to be embedded in concrete and fixing the same.
- In RCC work, to avoid displacement of reinforcement bars in any direction and to ensure proper cover, only factory made round / square type cover block and should be used.

- Nothing extra will be paid for centering, shuttering, reinforcement and RCC work for sloped slabs and beams, unless otherwise specified in the item.
- Steel bars shall be stored about 30 to 45 cm above ground and where the storage is for more than 3 months, a coat of cement wash shall be given to the bars. Nothing extra shall be paid towards cost of application of cement wash.
- Some restrictions may be imposed by the State Government on quarrying of sand, stones, etc from certain areas. For timely completion of work the contractor shall have to bring such materials from other quarrels located elsewhere.
- The Contractor shall give ten years guarantee in the prescribed proforma for water proofing items specified in the schedule of quantities. In addition to this 10% of the quoted cost of items shall be retained either in cash / fixed deposit or in the form of bank guarantee, which shall be released after the expiry of ten years from the date of completion if no defects are found in water proofing or the defects are made good. This amount shall be adjusted against the expenses incurred on making good the defects if the contractor commits breach of guarantee.
- In case of any difference in the Hindi version and English version in any of the condition of contract, English version shall prevail.
- It is the responsibility of the contractor to obtain necessary no objection certificate, wherever required for approval of drawings, water supply, sanitary connection, electricity connection, completion certificate, occupation certificate, clearance from fire department etc. from Central Govt. / State Govt./Development Authority / Municipal Corporation / ZillaParishad/Local Bodies/ Village Panchayat or any other organization as applicable.
- Nothing extra shall be paid to the contractor for obtaining such sanctions / approval/ clearance from the above bodies. However, necessary requisition and letters required in this regard shall be given by the Department. The required fees and other statutory deposits as may be prescribed by the above bodies shall be borne by the Institute.
- To facilitate gas connection, holes (if required by the Engineer-in-Charge) including suitable rubber gasket shall be provided in the kitchen platform of RCC slab/granite/other stone slab etc. Nothing extra will be paid on the account and rates quoted for relevant items are inclusive of making such provision.
- Concrete mixers to be used on the work shall have arrangement for weighing water and controlling water cement ratio.
- Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been in built in the items and nothing extra shall be payable (or) extra cement considered in consumption on this account.

- If the actual weight of reinforcement and structural steel to be used in the work differs from standard tables the following procedure shall be followed for arriving at the quantity for payment.
 - a) If the actual weight is more than standard weight only standard weight shall be considered for payment.
 - b) If the actual weight is less than standard weight but within the permissible variations only actual weight shall be considered for payment.
- The Contractor shall arrange to keep the premises neat and clean. The rubbish/ malba and unserviceable materials shall be removed on day to day basis.
- Bar chart.
 - a) The contractor shall give scientifically analyzed detailed bar chart for all the activities of the work within 15 days from the date of issue of letter of acceptance of tender. The bar chart shall be prepared covering the physical milestones as envisaged in the tender documents. Nothing extra shall be paid for preparation / modification of bar chart.
 - b) While preparing the above detailed bar chart, effort shall be made to take all possible items of work simultaneously.
 - c) Separate bar chart should be prepared exclusively for procurement of materials. The detailed bar chart should distinctly bifurcate the items of work and materials required for the execution of that item. Both should not be clubbed together. For example, for internal plumbing work the bar chart should show the procurement of pipe and other fittings with start and finish and items of work with start and finish dates separately. Both items should be interlinked preceding and succeeding activity. The bar chart not indicating procurement items separately will not be accepted.
 - d) Similarly bar chart should be prepared separately for arrangement of labour.
 - e) The bar chart so finalized and accepted by Institute should be got reviewed by the Institute, once in a month regularly. Modified /revised bar chart shall be prepared in the event of not adhering to the targets mentioned in the earlier bar chart. The contractor shall augment additional resources, materials and man power for achieving the targets, so submitted in the revised bar chart.
 - f) In addition to the above bar chart, the contractor shall submit detailed programme of activities using M.S. projects or equivalent software. He shall furnish the details both in hard copied as well as soft copies. Nothing extra shall be paid on this account.

- g) In case the above details are not furnished within 15 days as mentioned above, recovery @Rs.1000/- per day till its receipt by Engineer-in-Charge shall be effected from the first RA bill.
- Third party quality assurance incase the Institute decides to engage third party quality assurance system, the same will be engaged by the Institute and the contractor will render necessary arrangement for the inspection of work similar to clause 16 of special conditions.
 - Water tanks, taps sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws and specifications of the Municipal Body / Corporation where C.P.W.D 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.
 - The rate shall be for all heights and levels for centering, RCC and finishing to be done.
 - Unless otherwise specified, nothing extra, whatsoever shall be paid for executing the work as per the above SPECIAL CONDITIONS.

2.1 **Project Control System**

The Contractor shall provide an integrated control system by preparing co-ordinate sequence and time programmes incorporating work package activities of other agencies and sub-contractors. A suggested Project Control System forms part of the Appendix to Tender. The Contractor shall examine the said system and within seven days after the date of the Letter of Acceptance, submit to the Institute for his approval a modified system in such a form and detail as the Institute shall reasonably prescribe. This system shall after approval form part of the Contract Agreement and shall be treated as a baseline, to monitor determine delays in the individual activities, work milestones or the overall duration of the Works. In the event of the Contractor not submitting any modified system within the prescribed time period the suggested Project Control System shall be deemed to have been accepted by the Contractor and shall remain binding on him.

2.2 **Programme**

2.2.1 **Programme to be submitted**

The Contractor shall, pursuant to Clause 2.1 hereof, provide to the Institute a Master Construction Schedule showing all work packages and construction milestones along with Detailed Weekly Construction Schedules with Activities of shop drawings, samples, approvals, procurement, site execution, testing, commissioning and acceptance.

2.2.2 **Revised Programme**

If at any time it should appear to the Institute that the actual progress of the works does not conform to the programme approved under Sub-Clause 2.1, the Contractor shall produce at the request of the Institute/ Project Manager/ Consultant, a revised programme showing the modifications to such programme necessary to ensure completion of

the Works within the Time for Completion. The revised programme shall include a written explanation on activities exceeding the estimated time.

2.2.3 Cash flow Estimate to be submitted

The Contractor shall, pursuant to Clause 2.1 hereof, provide to the Institute for his information a detailed cash flow estimate, at monthly intervals, of all payments to which the Contractor shall be entitled under the Contractor.

2.3 Rate of Progress

If for any reason, which does not entitle the Contractor to nay extension of time, the rate of progress of the Works or any section is at any time, in the opinion of the Institute, too slow to comply with the Time of Completion, the Instituteshall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Institute to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Institute under this Clause, the Contractor considers it necessary to do any work at night or on locally recognized days of rest, he may seek the consent of the Institute to do so. Provided that if any steps taken by the Contractor, be determined by the Institute and may be deducted by the Institute from any moneys due or to become due to the Contractor and the Institute shall notify the Contractor accordingly with a copy to the Institute.

2.4 Opportunities for other Contractors

The Contractor shall, in accordance with the requirements of the Institute, afford all reasonable opportunities for carrying out their work to:

- a) any other contractors employed by the Institute and their workmen,
- b) the workmen of the Institute, and
- c) the workmen of any duly constituted authorities who may be employed in the execution on or near the site of any work not included in the Contract or of any Contract which the Institute may enter into in connection with or ancillary to the Works.

2.5 Day work

The Institute may, if in his opinion it is necessary or desirable, issue an instruction that any varied work shall be executed on a day work basis. The Contractor shall then be paid for such varied work under the terms set out in the day work schedule included in the Contract and at the rates affixed thereto by him in the Tender.

The Contractor shall furnish to the Institute such receipts or other vouchers as may be necessary to prove the amounts paid and, before ordering materials, shall submit to the Institute quotations for the same for his approval.

In respect of such of the Works executed on a day work basis, the Contractor shall, during the continuance of such work, deliver each day to the an exact list, in duplicate, of the names, occupation and time of all workmen employed in such work and a statement also in duplicate, showing the description and

quantity of all materials and Contractor's Equipment used thereon or there for other than Contractor's Equipment which is included in such day work schedule. One copy of each list and statement will, if correct, or when agreed, be signed by the Institute and returned to the Contractor.

At the end of each month the Contractor shall deliver to the Institute a priced statement of the labour, materials and Contractor's Equipment, except as aforesaid, used, and the Contractor shall not be entitled to any payment unless such statements and lists have been fully and punctually rendered. Provided always that if the Institute considers that for any reason the sending of such lists or statements by the Contractor was impracticable he shall nevertheless be entitled to authorize payment for such work, either as day work or at such value therefore as shall be in his opinion fair and reasonable.

2.6 Office Accommodation

The Contractor shall provide, erect and maintain at his own expense, simple, water-tight office accommodation for the Institute. The accommodation shall be well-lit and ventilated and provided with lockable doors and windows, coolers and fans. The office of the Institute shall be sufficiently large to accommodate the Institute and his assistants, and shall be suitably furnished with desks, chairs, board/s for drawing, and tack boards on walls for displaying drawings and programmes. The accommodation shall not be demolished till so directed by the Institute. The structures shall be relocated, if required for the Works, and removed on completion of the Works at the Contractor's own cost. All dismantled materials shall belong to the Contractor.

2.7 Telephones

The Contractor shall provide, install and maintain at his expense one telephone for the Works. He shall pay all charges in connection with the same till the completion of the Works. An extension of the above telephone shall be provided to the Institute at his office at site.

2.8 Sanitary Conveniences

The Contractor shall at his expense provide and erect all necessary sanitary conveniences for the site staff including the Institute and his assistants, maintain them in a clean, orderly condition and clean and deodorize the ground after their removal. The Contractor shall submit a typical drawing of the sanitary convenience arrangements for approval of the Institute.

2.9 Nominated Subcontractors

(a) Definition of "Nominated Subcontractors"

All specialists, merchants, tradesmen and others executing any work or supplying any goods, materials, Plant or services for which provisional sums are included in the Contract, who may have been or are nominated or selected or approved by the Institute, and all persons to whom by virtue of the provisions of the Contract the Contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be Subcontractors to the Contractor, and are referred to in this Contract as "Nominated Subcontractors".

(b) Objection to Nomination

The Contractor shall not be required by the Institute, or be deemed to be under any obligation, to employ any nominated Subcontractor against whom the Contractor may raise reasonable objection or who declines to enter into a subcontract containing provisions: that in the respect of the works, goods, materials, Plant or services the subject of the subcontract, the nominated Subcontractor will undertake towards the Contractor such obligations and liabilities as will enable the Contractor to discharge his own obligations and liabilities towards the Institute under the terms of the Contract and will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfill such liabilities, and that the nominated Sub-contractor will save harmless and indemnify the Contractor from and against any negligence by the nominated Sub-contractor, his agents workmen and servants and from and against any misuse by him or them of any Temporary Works provided by the Contractor for the purposes of the Contract and from all claims as provided by the Contractor for the purposes of the Contract and from all claims as aforesaid.

(c) Design Requirements to be Expressly Stated

If in connection with any provisional sum the services to be provided include any design or specification of any part of the Permanent Works or of any part to be incorporated therein, such requirement shall be expressly stated in the Contract and shall be included in any nominated Subcontract. The nominated Subcontract shall specify that the nominated Subcontractor providing such services will save harmless and indemnify the Contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfill such liabilities.

(d) Payments to Nominated Subcontractors

For all work executed or goods, materials, Plant or services supplied by any nominated Subcontractor, the Contractor, the Contractor shall be entitled to:

- i) the actual price paid or due to be paid by the Contractor, on the instructions of the Institute and in accordance with the subcontract;
- ii) in respect of labour supplied by the Contractor, the sum, if any referred in the Bill of Quantities or, if instructed by the Institute as may be determined in accordance with Clause 1.5 above;
- iii) in respect of all other charges and profit, a sum being a percentage rate of the actual price paid or due to be paid calculated, where provision has been made in the Bill of Quantities for a rate to be set against the relevant provisional sum, at the rate inserted by the Contractor against that item.

2.10 Site Protection Guidelines

2.10.1 Downhill site protection during construction

Construction on hillsides generates two kinds of debris that can damage vegetation and ecological systems – hard construction debris, and liquid waste.

Hard construction debris consists of stones, bricks, aggregate and other materials that can roll downhill damaging vegetation and creating litter that is very difficult to clean up later. Damage to lower hill slopes from hard debris can be prevented by installing a chain-link fence beyond the staging area for each building.

Liquid waste consists of cement and other construction slurry, and construction water that can flow downhill creating erosion gullies. The installation of a fibrous barrier stabilized with some packed earth will act as an effective filter for slurry. Such barriers should be installed downhill of areas where slurry will be generated, across natural swales as well as downhill of construction water tanks, worker bathing areas etc.

2.11 Co-ordination with existing contractors

Contractor will ensure that his work sites, site offices and infrastructure, labour camps etc. are located not to be in conflict with the facilities of the existing Contractors. The initial location of these facilities will be approved by the Institute/ Project Manager/ Consultant and his decision will be final.

The Contractor remains responsible for his working relationship with the other Contractors on site and cannot claim any damages or compensation from the Institute for any delays, difficulties or costs that may arise from disputes with other Contractors.

2.12 Underground services protection

Underground services such as water supply, drainage, power, telephones etc. have already been laid. Some of these active services will be passing through the operational site area of retaining walls at the beginning of the work, the contractor will be handed over drawings showing the location of these services and their exact route marked on the ground.

The contractor is entirely and wholly responsible for the safe and continuous operation of the underground services in his area. He will carry out all necessary protective and supporting works, if required by him, to protect these services during his construction. Any damage caused by him will be expeditiously repaired at his own cost.

- 2.13 After issues the letter of award of work by the Institute, the contractor will immediately bring a professional survey team with a computerized total survey station to the site and layout all buildings from approved layout drawings. Exact existing site levels at all column locations will be forwarded to the Institute immediately. Based on these levels, the Institute will issue detailed foundation level drawings.

Delay on the Contractors part in sending exact existing site levels to Institute will result in delay in issuing foundation drawings for which the Contractor cannot claim any delayed completion. Contractor must issue all site levels to the Institute within two weeks of receiving layout drawings.

APPENDIX –II

BANK GUARANTEE PROFORMA OF PERFORMANCE GUARANTEE

BANK GUARANTEE NO:

DATED:

Amount Rs.

valid up to:

M/S INDIA INSTITUTE OF MANAGEMENT KOZHIKODE,

IIM Kozhikode Campus P.O

Kozhikode – 673 570.

1. In consideration of “Indian Institute of Management Kozhikode” (hereinafter called “The Institute”) having agreed to exempt M/s(Name & Address)..... (Hereinafter called the said “Contractor”) from the demand under the terms and conditions of the Tender No. and Work order No.dated made between the Indian Institute of Management Kozhikode having its office at IIMK Campus.P.O, Kunnamangalam, Kozhikode – 673 570 and M/s for the(Name of work)in the Campus of IIMK (hereinafter called the said “agreement”) of security deposit for the due fulfillment by the said contractor of the terms and conditions contained in the said agreement on production of a Bank Guarantee for Rs. (in words)
2. WE, (Name of Bank), Branch a body constituted and established under the --- ----- Act and having our registered office at (Hereinafter referred to as “the Bank”) at the request of M/s the said Contractor do hereby undertake to pay the Institute an amount not exceeding Rs. (in words)
3. We the bank 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 meet the recoveries due or likely to be due from the said contractor. Any such demand made on the Bank shall be conclusive as regards 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. (in words)
4. We, the Bank undertake to pay to the Institute any money so demanded not withstanding any dispute or disputes raised by the said contractor in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this presents being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the said contractor shall have no claim against us for making such payment.
5. We, 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 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 its claims satisfied or discharged or till the Institute certifies that the terms and conditions of the said agreement have been fully and properly carried out by the

said contractor and accordingly discharges this guarantee or tilldate.... whichever is earlier.

6. We, the Bank further agree with the Institute that the Institute shall have the fullest liberty without our consent and without effecting in any manner our obligations here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor to for-bear 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 or for any forbearance, act of omission on the part of the Institute or any indulgence by the Institute to the said contractor or by any such matter or thing, whatsoever which under the law relating to sureties would, but for the provision, have effect of so relieving us.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the said contractor.
8. We, the Bank, undertake not to revoke this guarantee during its currency except with the previous consent of the Institute in writing.
9. This guarantee shall be valid up to (date. The Bank shall extend the guarantee on a written request from the Institute. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged thereafter.
10. Notwithstanding anything contained herein above.
 - a). Our liability under this guarantee shall not exceed Rs.(in words)
 - b). This Bank Guarantee shall be valid up to...(date).. inclusive of claim period.
 - c). Our liability to under this guarantee will arise only if we receive a notice in writing from the Institute on or before ...(date) ... advising us of the said contractor's failure leading to our liability hereunder.

Mr. The Bank do hereby declare that Mr., who is authorized to sign this Guarantee/Undertaking on behalf of the Bank and to bind the Bank thereby.

This Guarantee will be valid up to (date) ...

SPECIAL CONDITIONS FOR CEMENT AND STEEL BROUGHT BY THE CONTRACTOR

1.0 CEMENT

- 1.1 The contractor shall procure 43 grade ordinary Portland cement conforming to IS: 8112/Portland Pozzolana Cement conforming to IS: 1489 (Part – I) as required in the work, from reputed manufacturers of cement having a production capacity of one million tons or more per annum such as ACC, Ultratech, zuari, Ambhuja etc. as approved by the Ministry of Industry, Government of India and holding license to use ISI certification mark for their product. The Tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially. Supply of cement shall be taken in 50kg bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-charge and got tested in accordance with provision of relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so. Every fresh cement batch should be brought to site at least 30 days before they are to be used/consumed in the work.
- 1.2 The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-charge.
- 1.3 The cement godown of the capacity to store a minimum of 2 months requirement shall be constructed by the contractor at site of work for which no extra payment shall be made. Double lock provision shall be made to the door of cement godown. The keys of one lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The Contractor shall facilitate the inspection of the cement godown by the Engineer-in-charge or his authorized representatives.
- 1.4 The cement shall be got tested by the Engineer- in -charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The frequency and details of the tests shall be decided by the Engineer- in-Charge depending on the quantum of supply in each batch. The cost of tests shall be borne by the contractor/Department in the manner indicated below:
- (a) By the contractor, if the results show that the cement does not conform to the relevant BIS codes.
 - (b) By the Department, if the results show that the cement conforms to relevant BIS codes.

- 1.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by the conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at rate so prescribed shall be made, in case of excess consumption no adjustment shall be made.
- 1.6 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.
- 1.7 Damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer- in – Charge. If he does not do so within 3 days of receipt of such notice, the Engineer- in – Charge shall get it removed at the cost of the contractor.
- 1.8 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. The stacks shall be in rows of 2 and 10 bags high with minimum of 0.6m clear. Bags should be placed horizontally continuous in each line. Actual size/shape of go down shall be as per site requirement and nothing extra shall be paid on this account. The decision of Engineer- in – Charge regarding capacity shall be final.
- 1.9 Cement register for the cement shall be maintained at site. The account of daily receipts and issues cement shall be maintained in the register in the proforma prescribed and signed daily by contractor or his authorized agent.
- 2.0 STEEL
- 2.1 The contractor shall procure TMT bars Fe500D grade from primary producers such SAIL, TISCO or RINL as approved by the Ministry of Steel. The TMT bars procured from primary producers shall conform to manufacturer's specifications.
- In case of non-availability of steel from primary producers the contractor may be permitted by the Engineer- in – Charge to use TMT reinforcement bars procured from secondary producers. The reinforcement bars are procured from secondary producers, the grade of the steel shall be Fe500D as per IS 1786 : 2008.. The secondary producers must have valid BIS License to produce HSD bars conforming to IS 1786 : 2008. In addition to BIS license, the secondary producer must have valid licence from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT bars. The TMT bars produced from secondary producers shall conform to the specifications as laid by Tempcore, Thermex, Evcon Turbo & Turbo Quench as the case may be. The specifications of TMT bars procured either from primary producers or secondary producers shall meet the provisions of IS 1786: 2008 pertaining to Fe500 D grade of steel.
- 2.2 The contractor shall have to obtain and furnish test certificates to the Engineer- in – Charge respect of all supplies of steel brought by him to the site of work.

2.3 Samples shall also be taken and got tested by the Engineer- in – Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specification as defined under para 2.1 above, the same stand rejected, and it shall be removed from the site of work by the contractor at his own cost within a week’s time or written orders from the Engineer- in – Charge to do so.

2.4 The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more or as decided by the Engineer- in – Charge.

2.5 The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion, and thing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

2.6 For checking nominal mass, tensile strength, bend test, re-bend test, etc., specimen of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

Size of bar	For consignment below 100 tonnes	For consignment above 100 tonnes
Under 10 mm dia	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10mm to 16 mm dia	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16 mm dia	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

2.7 The Contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor/Department in the manner indicated below:

- a) By the Contractor, if the results show that the steel does not conforms to relevant BIS codes.
- b) By the Department, if the results show that steel does not conforms to relevant BIS codes.

2.8 The actual issue and consumption of steel on work shall be regulated and proper accounts shall be maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations, recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment needs to be made.

2.9 The steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer- in – Charge.

VI. SAFETY CODE

1. The contractor shall be responsible for the safety of the labour employed by him and he shall be liable to pay the necessary compensation in case of accidents, as per the Workmen's Compensation Act.
2. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladder.
3. No portable single ladder shall be over 8m in length and the width between side rails shall not be less than 30cm (clear). Suitable foot holds and hand holds shall be provided on the ladder and the ladder shall be given sufficient inclination. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.
4. Scaffolding or staging more than 3.60m above ground or floor swung or suspended from an overhead support or erected with stationery support shall have a guard rail, properly attached, bolted, braced and otherwise secured at least 90cms above the floor or platform of such scaffolding and extending along the entire length of the necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building structure.
5. Working platform, gangway, stairways, etc. should be so constructed that they should not sag unduly or unequally. Such gangway, stairway, etc. should have adequate width and should be suitably fastened as described in the para above.
6. Suitable fencing or railing of 90cms minimum height should be provided for every opening in the floor of building or in a working platform to prevent the fall of persons or materials.
7. No floor, roof or other parts of the structure shall be so overloaded with materials or debris as to render it unsafe.
8. Safe means of access shall be provided to all working platform and other working places.
9. Adequate precautions shall be taken to prevent danger from electrical equipment's.
10. The Contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precaution and to pay damage and cost which may be awarded in any such suit, action or proceedings to any such persons or which may with the consent of the contractor be paid to compromise claim by any such person.
11. All trenches and excavations shall be provided with necessary fencing and lighting. Excavated materials shall not be placed within 1.5m of the edge of the trench or half of the depth of the trench whichever is more. All trenches of depth 1.2m or more shall be supplied with at least one ladder for each 30m length or fraction thereof. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.

12. Workers employed on mixing and handling materials like cement, asphalt, cement mortar, concrete, lime mortar, etc. shall be provided with protective foot wear and rubber hand gloves and protective goggles.
13. Workers employed on welding work shall be provided with welders' protective eye shield and gloves.
14. Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
15. No paint containing lead or lead products shall be used except in the form of paste or readymade paints.
16. Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
17. Overhaul shall be supplied by the Contractor to the workmen and adequate facilities shall be provided to enable the working painters to work during the periods of cessation work.
18. Hoisting machines and tackles used in the work including their attachment anchorage and supports shall be in perfect condition.
19. The ropes and pulleys etc. used in hoisting or lowering materials or as means of suspension shall be of durable quality and adequate strength and free from defects.
20. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe and good condition, and no scaffold, ladder or equipment shall be altered or removed while it in use.
21. Contractor should provide safety helmets for all their employees and to be insisted to wear the helmet while on duty.
22. There shall be maintained at readily accessible place at work site, first aid appliances including adequate supply of sterilized dress in and sterilized cotton wool.
23. An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates the help of a doctor or hospitalization.
24. There shall be provided and maintained at suitable places, easily accessible to labour a sufficient supply of cold water fit for drinking.
25. Adequate washing and bathing places shall be provided at or near the place of work separately for men and women. Such places shall be kept in clean and drained condition.
26. Separate latrine and urinals for men and women shall be provided at or near the places of work. Such latrines shall be kept clean and drained condition.
27. Contractor should also provide crèche for the little ones of their employees/ labourers.

VII. TECHNICAL SPECIFICATIONS

1. GENERAL

1.1 Preamble to Specifications

The conditions of contract and the drawings shall be read in conjunction with the specifications and matters referred to, shown or described in one are not necessarily repeated in the other. These specifications are comprehensive and may exceed the requirements of this project. Any ambiguity between the general specifications, Schedule of Quantities and contract drawings, shall be referred to the Institute and got clarified before the submission of tenders

Notwithstanding the sub-division of the specification in to various headings, every part of it is to be deemed supplementary to every other part and is to be read with it, so far it may be practicable so to do, or when the context so admit. In this contract, references is made to the latest Indian Standards, specifications or by-law including all revisions up to the date of invitation of tenders.

The contractor shall keep at site copies of all such standards and codes of practice referred to above throughout the period of contract.

1.2 Approved Manufacturers.

Names of approved manufacturers are given in the specifications. Reference in the specifications to approved manufacturers shall be construed as establishing a standard of quality and not as limiting competition.

The contractor shall include in his prices for supplying the items or materials from the approved manufacturers listed or other equivalent approved materials. All items or materials shall be delivered to the site in the manufacturers original unopened containers with the manufacturers brand and name clearly marked on them. All items or materials shall be assembled, mixed, fixed, applied or otherwise incorporated in the works in accordance with the printed instructions of the manufacturer of the item or materials. All mortar and concrete shall be machine mixed and mechanically vibrated. Measuring boxes of standard sizes are to be used for measuring coarse/fine aggregate. Date of laying / construction shall be marked on all major items of work for monitoring curing of the structure.

1.3 Scope of work

The works envisaged under this contract are mainly:

Painting and allied maintenance works in various Academic buildings of IIMK.

The details of work are;

- a) Distempering (one or more coat and Two or more coats) for inside wall and ceiling of the buildings.
- b) Plastic emulsion painting for interior walls
- c) Enamel painting for structural members, hand rails, grills, cupboards/wardrobes, etc.
- d) Exterior emulsion painting for exterior wall surfaces.
- e) Replacing the broken dislocated Roofing tiles on R.C.C slopping roof of the buildings.

- f) Re-fixing the dislocated ceiling tiles.
- g) Allied Maintenance such as repair/rectification works, etc.

1.4 Setting out the work

The contractor shall set out the works and during the progress of the work shall amend at his own cost any errors arising from inaccurate setting out. During the execution of the work contractor must cross check his work with the drawings. The contractor shall be responsible for all the errors in this respect and shall have to rectify all defects and/or errors at his own cost failing which the Institute reserves the right to get the same rectified at the risk and cost of the contractor.

1.5 Clearing up and handing over

Upon completion of the work all the areas should be cleaned. All floors, doors, windows, surface, etc. shall be cleaned down in a manner which will render the work acceptable to the Institute. All rubbish due to any reason, shall be removed daily from the site and the area left clean by the contractor as a part of the contract.

1.6 Tests

All materials and methods of tests shall conform to the latest rules, regulation and / or specifications of the following authorities where specified herein as applicable. Bureau of Indian Standards (BIS), British Standards Code of Practice (BS) in case no equivalent BIS is available. The Institute will have the option to have any of the materials tested and if the test results show that the materials do not conform to the specifications, such materials shall be rejected. A reasonable number of representative tests will be deemed to be included in the rates tendered.

1.7 Rates

The item rates quoted in schedule of quantities are deemed to include all the cost to execute the works in strict accordance with the relevant specifications read in conjunction with the appropriate Standard Specifications.

1.8 Mode of Measurements

All measurements will be taken in accordance with IS 1200 latest issue unless otherwise specified.

2.0 EARTH WORK

2.1 General

This specification deals with the clearance and preparation of the site for the commencement of the construction wherever applicable. This is deemed to include all preliminary works like dismantling/demolition, site clearance, general leveling etc. The tenderer shall inspect the site and satisfy him self about the nature of the ground, the subsoil, availability of labour and materials, and all other relevant factors such as access to site etc before quoting his rates. No claim will be entertained later on account of any misunderstanding or incorrect information or ignorance of the existing conditions etc on the part of the tenderer.

2.2 Blasting

Blasting is prohibited and shall not be permitted under any circumstances. The contractor has to remove hard rock met with by chiseling, wedging and barring.

2.3 Trimming of slopes

All slopes shall be trimmed manually or mechanically true to line and profile and consolidated to the satisfaction of Engineer-in-charge. Any isolated rock or boulder appearing on the face and likely to be unstable shall be removed and the void thereof filled with approved material and compacted.

2.4 Shoring / Earth work support

The contractor shall shore and strut the sides of excavation to the satisfaction of the Institute. Should there be any slips or settlement, notwithstanding the shoring, the contractor shall make good the same at his own expense, with concrete or other approved material, as directed by the Institute. Shoring shall be removed gradually side by side with backfilling to prevent any settlement and under no circumstances, until such time as the foundation concrete has hardened enough, to take any loss brought on by the removal. Under special circumstances, shoring shall be left in place, if so directed by the Institute. No extra payment shall be made for shoring. The rate for the same shall be included in the excavation items.

2.5 Dewatering

All excavation shall be kept free from the water from any source. The contractor shall provide and clear away on completion all drains, pumps, and other equipments, for this purpose. The contractor shall be responsible for preventing any subsidence of adjoining ground due to pumping. No extra payment will be paid to the contractor for bailing out water. The contractor's quoted rate for earth work shall include all such contingencies.

2.6 Contractor to keep excavation clear

Should any sand, mud, weed, rubbish or other materials be deposited on excavated area, by sandstorm, rain, flood, landslides or from any cause, whatsoever, such materials shall be removed by the contractor at his own expense.

2.7 Back filling

All materials used as fill shall be to the Institute's approval. Filling materials shall be well graded clean stone, Gravel and other approved non-plastic granular material, all not more than 100 mm, in any direction and shall be well consolidated in layers not more than 150 mm thick. Final compacting must be done just before concrete is to be laid.

All fill materials shall be compacted at moisture content appropriate to the material being used. The compacted fill shall achieve a density which shall not be less than 95% of the maximum dry density obtained. Filling shall be free of any wood, organic matter or any other deleterious material.

Sand, soil, gravel etc. from the excavation may be used for back filling pits and trenches or for making up levels subject to approval of the Institute and subject to

selection of proper materials. The contractor shall take instructions from the Institute regarding the type of excavated material is to be used for back fill.

In case the excavated materials are not approved for back filling, either totally or in part or if their quantity falls short of the quantity required for filling, suitable materials shall be brought to site from an approved source.

2.8 Measurements

Diagonal ridges, cross ridges, or dead-men shall be left in position shown by the Institute to enable accurate measurements being taken on the completion of the work. Where the ground is not uniform or where the site requires to be leveled, levels shall be taken before the start of the work and after the completion of the work and the quantity of excavation in cutting computed from these levels. The ridges or dead-man shall be removed by the Contractor at his cost after the measurements.

2.9 Excavation in all kind of soils and hard rock

Excavation and/or removal of any other material on the site, shall be carried out accurately to the lines, levels and dimensions shown in the drawings or as ordered by the Engineer-in-charge. The method of excavation shall be at the discretion of the Institute but should the dimensions of any excavation exceed those shown on the drawings or ordered by the Institute or should the sides collapse, the contractor will not be paid for such over excavation and he shall fill such extra space with approved material, at his own expense. All founding levels shall be got inspected by the Engineer-in-charge before the start of concrete or masonry. The founding bed shall be dressed and rammed satisfactorily.

3.0 CONCRETE WORKS

All concrete included in the works shall comply with the General requirements of this section of the specification except where those requirements are modified by the provisions of later clauses relating to specialized uses for concrete in which case the requirements of those clauses shall take precedence.

3.1 Supervision

A competent person shall be employed by the Contractor whose first duty will be to supervise all stages in the preparation and placing of the concrete. All tests on materials, the making and testing of cubes and the maintenance and calibration of all mixing and measuring plant shall be carried out under his direct supervision.

3.2 Materials

3.2.1 Cement

All cement shall be fresh when delivered. Cement shall be delivered in sound and properly secured bags or other packages ready for immediate use and shall be used direct from the bag. Cement containing lumps, which cannot be broken by a light touch of fingers, shall not be used in the works. Admixtures shall not be used without written consent of the Institute. The contractor shall provide a proper separate weatherproof store building with raised floor for cement on the site and shall at all times protect the cement from damp or any other deleterious influences.

3.2.2 Aggregates

Materials used as aggregates shall be obtained from a source known to produce aggregates satisfactory for concrete and shall be chemically inert, strong, hard, and durable, of limited porosity and free from adhering, coating, clay lumps, coal residues and organic or other impurities that may cause corrosion of reinforcement or may impair the strength or durability of the concrete.

Fine aggregates shall be natural sand or sand derived by crushing material like granite stone and shall be free from coagulated lumps. Sand derived from stone unsuitable for coarse aggregate shall not be used as fine aggregates.

Coarse aggregate shall be crushed stone. The pieces shall be angular, rounded in shape and shall have granular or crystalline or smooth non-powdery surface. Fragile, flaky and laminated pieces and mica shall not be present.

Aggregate shall be thoroughly washed with clean water if so directed by the Institute. Aggregate should be free from fine holes and stone should not be weathered.

3.2.3 Water

Water for mixing concrete shall be clean and free from harmful materials and comply with the requirements of clause .3 of IS 456 (Latest revision)

3.3 Placing of concrete in wet weather.

Concrete shall not be mixed and or placed in rainy weather or when there is likelihood of impending heavy showers. If it becomes necessary to place concrete during rainy weather, the contractor shall provide adequate protection by means of tarpaulin or similar other water proof material to immediately cover fresh concrete to prevent rain falling over it. This protection shall be left on the concrete for a period of 24 hrs. after placing of concrete.

3.4 Compacting concrete.

The concrete shall be fully compacted through out the full extent of the layer. It shall be thoroughly worked against the moulds and around any embedded items without displacing them, and in to corners of the moulds. Successive layers of the same lift shall be thoroughly worked together adjacent to the common face. The date of laying concrete shall be marked for curing and removal of form work.

4.0 FORM WORK

All form work shall be constructed to be rigid during the casting of concrete and constructed so that the surfaces adjacent to the concrete are with plus/minus 6 mm or the required surfaces when supporting the concrete and sufficiently water tight to prevent loss of liquid from the concrete and it shall be capable of being removed without shock or vibration to the concrete. Forms shall be cleaned with compressed air immediately before placing concrete to remove all rubbish. The inside faces of the form work shall be treated with a mould oil of type approved by the Institute. Shuttering shall be braced and strutted to prevent deformation under the weight and pressure of the wet concrete, constructional loads, wind and other forces.

Form work shall be so constructed that the concrete can be properly placed and thoroughly compacted. Form work shall be firmly supported and adequately strutted, braced or tied. It shall be capable of adjustment to the lines and dimensions of the finished concrete and it shall be sufficiently strong to resist without excessive distortion under the influence of the weather. The concrete should be done in

scientific and methodical manner so as to give a uniform finish in line and level, so that minim rendering or plastering is done. The work found defective, should be dismantled and redone and site clear.

5.0 MASONRY WORKS

5.1 Brick work

- i) The work shall conform to the IS. No: 1077-1986 of minimum crushing strength of 50 Kg/cm².
- ii) The building bricks are to be the best quality table moulded kiln burnt, patent bricks hard sound, square with sharp arises even and uniform in shape and colour free from cracks, stones, flaws and other defects. Samples of bricks are to be submitted to the Architect for before full quantity is ordered .All supply of brick to confirm to the sample approved. No brick after 24 hours immersion in water shall absorb water more than 15% of its own weight.
- iii) The common and sand shall be as described under 'Cement Concrete' and the mortar unless specified otherwise in Bill of Quantity is to be composed of one part cement to four parts of coarse sand by volume thoroughly mixed by hand. Hydrophobic cement used in mortar shall be thoroughly machine mixed. No mortar that has started to set shall be used in the work.
- iv) Every brick shall be thoroughly soaked in water before use. Broken bricks shall not be used except as closers. The course shall be truly horizontal and the work strictly plumb, joints shall be broken vertically and they shall not exceed ½" in thickness. All joints in brick work are to be well filled with mortar.
- v) The brick work shall not be raised more than 12 single courses per day and shall be built in English Bond, except brick on edge and half brick thick walls shall be built in stretcher bond. Except for brick on edge work, the bricks shall be placed with "frog" facing upwards.
- vi) All joints in brick work shall be raked out ½" deep as the work proceeds, and before the mortar sets.
- vii)The brick work is to be carried out with all the necessary set backs, projections, cuttings and too things in conformity with the drawings.
- viii)The brick shall be cured by watering and continuously kept wet for 10 days, and the work shall be protected during rainy season.
- ix) All uneven, irregular and bad brick work poor in workmanship shall be demolished if deemed necessary by the Architect and rebuilt by the contractor at the contractor's expenses. If necessary the contractor will have to provide wooden plug, etc for his own work and for which there will be no special payment on that account. The work will have to be executed at any height and lift will not form the criterion for any extra work.
- x) Should any efflorescence be observed in brick work, it should be washed down by clean water and brick surface treated with such chemicals as are deemed necessary by the Architect without any extra charge and at the contractor's own expenses, till efflorescence subsides .Should the efflorescence persist the work shall be demolished if deemed necessary by the Architect and the work rebuilt

with new bricks including making good all the work disturbed without any extra charge.

6.0 STEEL FABRICATION WORKS

6.1 General

This specification covers the fabrication and transportation to site and erection on prepared foundations. Fabrication, erection and approval shall be in compliance with General Specifications and IS: 800-1984 and Drawings to be supplied to the contractor during execution of the work.

7.0 CEMENT PLASTERING WORKS

All plaster works shall be of the best workmanship and in strict accordance with the dimensions of the drawings. All plastering shall be finished to true levels including plumps, without imperfections and square with adjoining work. It shall form proper foundations for finishing materials such as paint etc. Masonry and concrete surface to which plaster is to be applied shall be clean, free from efflorescence, sufficiently rough and keyed to ensure proper bond.

The joints in the brick work, concrete blocks, shall be raked to a depth of 15 mm while the masonry is green. Concrete surfaces to receive plaster shall be suitably roughened. All walls shall be washed with water and kept damp for 10 hrs. before plastering. The plastering unless specified otherwise shall be a minimum of 12 mm thick over all walls.

8.0 PAINTING WORKS

8.1.1 Materials

Paints, Distemper, etc of approved brand and manufactures shall be used. Only ready mixed paint, as received from manufactures without any admixture shall be used.

If for any reason thinning is necessary in case of ready mixed paint the brand of thinner recommended by the manufacturer or as instructed by the Engineer-in-charge shall be used.

Approved paints, Distemper, or varnishes shall be brought to the site of work by the contractor in their original container in sealed condition. The material shall be brought in at a time in adequate quantities to suffice for the whole work or at least a fortnight's work. The materials shall be kept in the joint custody of the contractor and the Engineer –in –charge. The empties shall not be removed from the site of work, till the relevant item of work has been completed and permission obtained from the Engineer-in-charge.

8.1.2 Commencing work

Painting shall not be started until the Engineer –in-charge has inspected the item of work to be painted, satisfied himself about their proper quality and given his approval to commence the painting work. Painting of external surface should not be done in adverse weather condition like hail storm and dust storm.

Painting, except the priming coat, shall generally be taken in hand after practically finishing all other building work.

The rooms should not be thoroughly swept out and the entire building cleaned up, at least one day in advance of the paint work being started.

8.1.3 Preparation of surface

Painting surface (both new and old surfaces) shall be thoroughly cleaned and dusted off. All the rust, dirt, scales, smoke, splashes, mortar dropping grease, paint, etc shall be thoroughly removed from the surfaces before painting is started. Approval shall be obtained from the Engineer in charge before painting the surface. The rate quoted for all items of painting work (Distempering, exterior emulsion, plastic emulsion, synthetic enamel, rust remover, etc..) shall include all the cleaning and preparation works mentioned above and no extra cost shall be paid for these surface preparation works.

8.2 Painting on old surface

The surface which has been painted earlier shall be considered to be old surface.

8.2.1 Preparation of surface

a).Wood work: If the old paint is sound and firm and its removal is considered unnecessary, the surface shall be rubbed down with pumice stone after it has been cleaned of all smoke and grease by washing with lime and rinsing with water and drying. All dust and loose paint shall be completely removed. The surface shall then be washed with soap and water.

If the old painted surface is blistered or flaked badly or paint shall be completely removed as described in para 13.54 and such removal shall be paid for separately. Holes and cracks, if any shall be stopped with glaziers putty conforming to IS: 419. Further the painting itself shall be treated as on new surface and paid for, accordingly.

b).Iron and steel work: If the old paint is sound and firm and its removal is considered unnecessary, it shall be rubbed with wire brushes and any loosened paint taken off. All dust shall then be thoroughly wiped away. The surface shall then be wiped finely with mineral turpentine to remove grease and perspiration of hand marks etc and then allow drying.

If the old painted surface is in bad condition and blistered and flaked, the old paint shall be completely removed and the surface prepared, as described in Para 13.54, Such removal shall be paid for separately. The painting including the priming coat shall be treated as on the new work and paid for accordingly.

c).Plastered surface: It shall be as specified for wood work. If before painting any portion of the wall shows signs of dampness, the causes shall be investigated and the damp surface shall be properly treated. Such treatment shall be paid for separately. A thin coat of white lead if so required shall be applied on the wet or patchy portion of the surface before painting is undertaken and this shall be paid extra.

8.3 Acrylic Washable Distempering

8.3.1 Material

Acrylic Washable Distemper of approved brand and manufacture shall be used. The primer used shall be cement primer or distemper primer. This shall be of same manufacture as distemper. The distemper shall be diluted with water or any other prescribed thinner in a manner recommended by the manufacturer. Only sufficient quantity of distemper required for one day's work shall be prepared.

The distemper and primer shall be brought by the contractor in sealed tins in sufficient quantities at a time to suffice for a fortnight's work, and the same shall be kept in the joint custody of the contractor and the Engineer-in-charge. The empty tins shall not be removed from the site of work, till this item of work has been completed and passed by the Engineer-in-charge.

8.3.2 Preparation of surface

The surface shall be thoroughly cleaned of dust, old white or colour wash by washing and scrubbing. The surface shall then be allowed to dry for at least 48 hours. It shall then be sand papered to give a smooth and even surface. Any unevenness shall be made good by applying putty, made of plaster of paris mixed with water on the entire surface including filing up the undulations and then sand papering the same after it is dry.

In the case of old work, all loose pieces and scales shall be removed by sand papering. The surface shall be cleaned of all grease dirt, etc.

Pitting in plaster shall be made good with plaster of paris mixed with the colour to be used. The surface shall then be rubbed down again with a fine grade sand paper made smooth. A coat of the distemper shall be applied over the patches. The patched surfaces shall be allowed to dry thoroughly before the regular coat of distemper is applied.

8.3.3 Application

The priming coat shall be with distemper or cement primer, as required in the description of item and as recommended by the manufacturer. Only approved cement primer shall be used. Primer coat shall be preferably applied by brushing and not by spraying. Horizontal strokes shall be given first and vertical strokes shall be applied immediately afterwards. The entire operation will constitute one coat. The surface shall be finished as uniformly as possible leaving no brush marks.

8.3.4 Note

If the wall surface plaster has not dried completely, cement primer shall be applied before distemping the walls. But if distemping is done after the wall surface is dried completely, distemper primer shall be applied.

For distemping 150 mm. double bristled brushes shall be used. After each days work, brushes shall be thoroughly washed in hot water with soap solution and hung down to dry.

For old work no primer coat is necessary.

8.3.5 Rate

Rate shall include cost of all material and labour involved in all the operations described above including scaffolding and surface preparation.

8.4 Cement paint

Cement Paint shall be confirming (IS: 5410-1969) of approved brand and manufacture.

8.4.1 Preparation of Surface.

The surface shall be thoroughly cleaned of all mortar dropping, dirt, dust, alga, grease and other foreign matter by brushing and washing. The surface shall be thoroughly wetted with clean water before the cement paint is applied.

8.4.2 Preparation of mix

Cement paint shall be mixed in such quantities as can be used up within an hour of its mixing as otherwise the mixture will set and thicken, affecting flow and finish.

Cement plaster shall be mixed with water in two stages. The first stage shall comprise of two parts of cement paint and one part of water stirred thoroughly and allowed to stand for 5 minutes. Care shall be taken to add the cement paint gradually to the water and not vice versa. The second stage shall comprise of adding further one part of water to the mix and stirring thoroughly to obtain a liquid of workable and uniform consistency. In all cases the manufacturer's instructions shall be followed meticulously. The lid of cement paint drums shall be kept tightly closed when not in use, as by exposure to atmosphere the cement paint rapidly becomes air set due to its hydrophobic qualities.

8.4.3 Applications

The solutions shall be applied on the clean and wetted surface with brushes or spraying machine. The solution shall be kept well stirred during the period of application. It shall be applied on the surface which is on the shady side of the building so that the direct heat of the sun on the surface is avoided. The method of application shall be as per Manufacturer's specifications. The completed surface shall be watered after days work.

Water cement paint shall not be applied on surface already treated with white wash, colour wash distemper dry or oil bound, varnishes, paints etc. It shall not be applied on gypsum, wood and metal surfaces.

8.4.4 Rate

Rate shall include cost of all material and labour involved in all the operation described above including scaffolding and surface preparation.

8.5 Wall Painting with Emulsion Paint

The plastic emulsion paint is not suitable for application on external, wood and iron surface and surface which are liable to heavy condensation. These paints are to be used on internal surfaces except wooden and steel. Plastic emulsion paint as per IS: 5411 of approved brand and manufacture and of the required shade shall be used.

8.5.1 Painting on new surface

a).Application: The number of coats shall be as stipulated in the item. The paint will be applied in the usual manner with brush, spray and roller. The paint dries by evaporation of the water content and as soon as the water has evaporated the film gets hard and the next coat can be applied. The time of drying varies from one hour on absorbent surfaces to 2 to 3 hours on non absorbent surfaces.

The thinning of emulsion is to be done with water and not with turpentine. Thinning with water will be particularly required for the under coat which is applied on the absorbent surface. The quantity of water to be added shall be as per manufacturer's instructions.

The surface on finishing shall present a flat velvety smooth finish. If necessary more coats will be applied till the surface presents a uniform appearance.

b).Precautions:

i. Old brushes if they are to be used with simulation paints should be completely dried of turpentine or oil paints by washing in warm soap water. Brushes should be quickly

washed in water immediately after use and kept immersed in water during break periods to prevent the paint from hardening on the brush.

ii. In the preparation of wall for plastic emulsion painting, no oil base putties shall be used in filling cracks, holes etc.

iii. Splashes on floors etc shall be cleaned out with out delay as they will be difficult to remove after hardening.

iv. Washing of surfaces treated with simulation paints shall not be done within 3 to 4 weeks of application.

8.5.2 Painting on old surface

a).Preparation of surface: This shall be done, generally as specified in 8.2.1© except that the surface before application of paint shall be flattened well to get the proper flat velvety finish after painting.

b).Application: The number of coats to be applied shall be as in description of item. The application shall be as specified in 8.5.1(a) except that thinning with water shall not normally to be required. Other details shall be as specified in 8.0 as far as possible.

8.6 Painting with Enamel Paint

Enamel Paint (Conforming to IS: 2933) of approved brand and manufacture and of the required colour shall be used. For the under coat, the paint of same quality but of shade to suit that of the top coat shall be used.

Preparation of surface and application shall be as specified under 8.3.2 for painting on new surfaces or old surfaces, as the case may be. Other details shall be as specified in 8.0 as far as possible

8.7 Painting with Synthetic Enamel Paint

Synthetic enamel paint(conforming to IS :2932) of approved brand and manufacture and of the required colour shall be used for the top coat and an under coat of ordinary paint of shade o match the top coat as recommended by the same manufacturer as far as top coat shall be used.

8.7.1 Painting on New Surface

Preparation of surface shall be as specified in 8.2.1(a) or (b) as the case may be.

a).Application: The number of coats including the under coat shall be as stipulated in the item.

i. Under Coat: One coat of the specified ordinary paint of shade suited to the shade of the top coat, shall be applied and allowed to dry overnight. It shall be rubbed next day with finest grade of wet abrasive paper to ensure a smooth and even surface, free from brush marks and all loose particles dusted off.

ii).Top Coat: Top coats of synthetic enamel paint of desired shade shall be applied after the under coat is thoroughly dry. Additional finishing coats shall be applied if found necessary to ensure properly uniform glossy surface. Other details shall be as specified in **8.0** as far as they are applicable.

8.7.2 Painting on Old Surface

a).Preparation of Surface: Where the existing paint is firm and sound it shall be cleaned of grease, smoke etc. and rubbed with sand paper to remove all loose

particles dusted off. All patches and cracks shall then be treated with stopping and filler prepared with specified paint. The surface shall again be rubbed and made smooth and uniform.

If the old paint is blistered and flaked it will be necessary to completely remove the same. Such removal shall be paid for separately and the painting shall be treated as on new surface.

b).Painting: The number of coats as stipulate in the item shall be applied with synthetic enamel paint. Each coat shall be allowed to dry and rubbed down smooth with very fine wet abrasive paper, to get and even glossy surface. If however, the surface is not satisfactory additional coats as required shall be applied to get correct finish. Other details shall be specified in **8.0** as far as they are applicable.

8.8 Textured paint

The textured finish to external surfaces of walls as per manufacturers specifications and approved by the Institute including scaffolding, etc. complete.

VII. LIST OF APPROVED MAKE OF MATERIALS

Sl. No.	Item	Brand/ Make
1	Cement	ULTRATECH/ ACC/ Malabar or Approved Equivalent*.
2	Coarse river sand/ Stone aggregate, etc	From approved Source/quarry*.
3	Steel/G.I./Aluminium items, etc	TATA, Jindal Co., or approved equivalent*.
4	Acrylic Distemper	Tractor (Asian), Bison (Berger), Promise (ICI), or Approved equivalent*.
5	Exterior Emulsion	Apex Ultima (Asian)/ Weather coat All guard (Berger)/ Weathershield max (ICI) or approved Equivalent*.
6	M.P. Roofing/Ridge/ Hip/ valley, Terracotta Tiles, etc	Common wealth or approved equivalent*.
7	Water proofing items	Dr. Fixit/ Berger or approved equivalent*.
8	Ceramic Tiles	KAJARIA/ H&R JOHNSON/ NITCO
(* to be approved by the Engineer-in-Charge)		