



**LIFE INSURANCE CORPORATION OF INDIA  
JEEVAN PRAKASH , HARIDWAR ROAD  
Post Box No.-7, DEHRADUN-248 001**

## **E – TENDER**

**LIC/DDN/Engg/LT-09/2021-22**

**NAME OF WORK: E-Tender for External/ Internal Painting & miscellaneous works of B.O. at Rishikesh under D.O.-Dehradun.**

### **BID-II**

## **CONDITIONS OF CONTRACT, TECHNICAL SPECIFICATIONS AND DRAWING.**

**This document is a part of FINANCIAL BID (BID-II). The bidders have to digitally sign all pages of documents with their Digital Signature Certificate & upload the same on e-Tender Portal on or before 24.02.2022 upto 15.00 hrs..**

1. Downloading of Tender document: From 10.02.2022(10.00Hrs.) to 23.02.2022(17.00 Hrs.)
  2. Last date of e- submission of Bids : 24.02.2022 up to 15.00 Hrs.
  3. Physical submission of EMD & Tender processing fee to LIC: 24.02.2022 up to (15.00 Hrs).
  4. Opening of BID-I (containing EMD & Tender processing fee) and Online opening of Bid-II: 24.02.2022 at (15.30 Hrs.)
  5. Earnest Money Deposit: Rs 7200/- (Rs. Seven Thousand two Hundred only)
  6. Tender Processing Fee: Rs.500/- plus 18% GST i.e. Total Rs. 590/-
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**LETTER TO CONTRACTOR FROM Sr. DIVISIONAL MANAGER**

To,

\_\_\_\_\_  
\_\_\_\_\_

Dear Sir / Sirs,

**NAME OF WORK: E-Tender for External/ Internal Painting & miscellaneous works of B.O. at Rishikesh under D.O.-Dehradun.**

We hereby publish NIT inviting the TENDER on e-Tendering Portal (Website) through **www.tenderwizard.com/LIC** in Electronic Mode herein after referred as “**e-Tendering**” and consisting of following :

- (a) **BID I: TENDER FEE with applicable GST & NEFT details (To be submitted physically in a sealed envelope marked as Envelope-I). The NEFT shall comprise of Cancelled Bank Cheque, Copy of Pan Card and Filled in NEFT Mandate form. The scanned copies of the all documents mentioned shall also be submitted online.**
- (b) **BID II : FINANCIAL BID ( To be submitted online )**

Please note that the Bid Documents can be downloaded from above portal (website) and should be mandatorily submitted in **Online Electronic Mode** hereinafter referred as “**Online Offer**”. The submission of online offer duly Encrypted & Digitally Signed on above portal should be in prescribed Electronic Forms (online) available on the above portal for respective tender in Online Envelope(s) on or before **as per the Key Dates mentioned in the tender document and online portal for above tender.**

- 1) The related documents are available for the work will also be available for inspection at the following office:

Engineering Department, LIC of India,  
Jeevan Prakash building ,  
“Jeevan Prakash ”, Haridwar Road , Dehradun

- 2) The bidders should submit Tender Fee of Rs. 500/-- (**Rupees Five Hundred only**) **plus GST** Rs.90/-- (**Rupees Five Hundred Ninety Only**) and Earnest Money Deposit (EMD) of **Rs 7200/- (Rupees Seven Thousand Two Hundred Only)** in the form (Bank Guarantee for total amount/ Bank Guarantee plus Demand Draft in parts as mentioned in Detailed E-Tender Notice ) / or fully in the form of Demand

**all the above documents shall also be submitted online.** The Tender fee plus GST shall be accepted only in the form of Demand Draft. The e-Tenders will be opened **As per the Key Dates** in the presence of contractors or accredited representatives, who wish to attend the online Tender Opening process. The bidders can view the Tender Opening details through their respective Login IDs on the above mentioned e-Tender Portal (Website). The Tenderer should ensure that their tender is received **Online Electronically** on or before the due date and time as specified in “**Key Dates**” in the Tender Document and above mentioned Portal (website).

- 3) Please note that above e-Tendering System is an automatically time locked system which will be locked immediately as soon as due date and time is over and will not accept any offer after that. So, the tenderers are strictly advised to do their process well before the due date and time to avoid any such instances.
- 4) Necessary Guidelines to Submit tenders on Electronic Tendering System is broadly given in the Tender document. The tenderers are advised to carefully read the above document for understanding of e-Tendering System. The tenderer may also contact the Help Desk of e-Tendering Portal in case of any difficulty in submission of online Bids.
- 5) The Life Insurance Corporation of India does not bind itself to accept the lowest or any tender.

Encl: As above.

Yours faithfully,

**Sr. Divisional Manager**

**LETTER FROM CONTRACTOR TO Sr. DIVISIONAL MANAGER****TO BE SUBMITTED ONLINE ON OR BEFORE ON 24.02.2022 upto 15.00Hrs.****As per the Key Dates**

Date:

From:

.....

.....

.....

To,  
Sr. Divisional Office,  
Life Insurance Corporation of India,  
Haridwar Road ,P.B.-7, Dehradun , UK.

**NAME OF WORK: E-Tender for External/ Internal Painting & miscellaneous works of B.O. at Rishikesh under D.O.-Dehradun.**

Dear Sir,

1) Having examined the Enrolment Form, Selection Criteria , Technical Specifications, Schedule of Quantities, Detailed Drawings, Specifications, Conditions of Contract etc. included in the tender document for the Percentage Rate Contract relating to the above work, having visited/examined the site of the existing premises, having acquired the requisite information relating thereto as effecting the tender invited by you on behalf of the Life Insurance Corporation of India, I/We, the undersigned hereby offer to carry out the above mentioned work for a period of One years after Defect Liability Period on Percentage Rate basis in strict accordance with the Contract Conditions and Specifications.

I/We, undertake to complete and deliver the whole of the works within a period as specified in Appendix to the Conditions of Contract from the date of issue of intimation from you that the tender has been accepted and upon receiving possession of the site. I/We shall be under the obligation to complete the entire work within the period of completion failing which to pay the sum as stated in the Appendix to the Conditions of Contract i.e. 1.5% per month of delay to be computed on per day basis as mentioned under Clause 19.1 of „Condition of Contract“, not exceeding 10% of the tendered value of work.

2) I/We enclose herewith my/our tender with an Earnest money remittance of Rs. 7200/- **(Rupees Seven Thousand Two Hundred Only)** in the form of Crossed Demand Draft of Nationalized Bank/ Scheduled Bank/ payable at DEHRADUN.

**OR**

50% amount of Total EMD Rs. 7200/- in the form of Crossed Demand Draft of Nationalized Bank/ Scheduled Bank and 50% amount of EMD (7200/-) in the form of Bank Guarantee of Nationalized/ scheduled Bank payable at Dehradun or any centre having LIC branch/ Divisional Office.

**OR**

The entire EMD (Rs. 7200/- ) in the form of Bank Guarantee of Nationalized/ scheduled bank payable at Dehradun or any centre having LIC branch/ Divisional Office.

**OR**

I/We have remitted the EMD 7200/- amount ) along with the Tender Fees by NEFT and the NEFT Receipt stating the URT no. is enclosed.

I/We, hereby agree that part of this sum shall be forfeited by the 'Life Insurance Corporation of India in the event of my/our tender being accepted and I/We fail to execute Contract when called upon to do so.

3) In the event of the tender being accepted, I/We, agree to the retention of my/our EMD ( 7200/-) as a part of Security Deposit and the balance amount of Security Deposit to be recovered at 7.5% of Gross Value of work done from my / our Running Account Bills. If the 50% of EMD is submitted by me/us in the form of Bank Guarantee and I/We want to avail cash option i.e. deduction of security deposit from the bills, then I/We have to deposit a Demand draft/Pay order in the name of Life Insurance Corporation of India payable at Dehradun amounting to 50% EMD **(Rs. 7200/-** in lieu of Bank Guarantee submitted towards EMD. Once this amount is deposited then I/We can avail cash option for Security deposit and the Bank Guarantee submitted towards EMD shall be returned to me/us.

**OR**

I/We, agree to furnish a lump sum Bank Guarantee for total Security Deposit of Rs. .... /-(Rupees ..... ) or two Bank Guarantees each with 50% value from any Nationalized/Scheduled Bank as per specimen given in Annexure "B" to Conditions of Contract, within 07 (Seven ) days of acceptance of tender. The Bank guarantee shall be from any Nationalized /Scheduled Bank located preferably at Kanpur or where a Branch/Division of LIC of India exists.

4) I/We, agree to furnish a lump sum Performance Guarantee amounting to Rs. .... (Rupees ..... only)

in the form of Bank Guarantee from any Nationalized/Scheduled Bank as per specimen given in Annexure "C" to Conditions of Contract, within 07 (Seven ) days of acceptance letter. The Bank guarantee shall be from any Nationalized /Scheduled Bank located preferably at Kanpur or where a Branch/Division of LIC of India exists.

5) I/We, note that the Earnest Money Deposit of **Rs. 7200/- (Rupees Seven Thousand Two Hundred only )** would be refunded to me/us.

- a. On expiry of the validity of the tender or earlier at the discretion of Sr. Divisional Manager in case my/our tender is not accepted and

- b. In case my/our tender is accepted, after I/We, furnish Bank Guarantees as mentioned above.
- 6) I/We, agree,
- a) In case my/our tender is withdrawn before expiry of the validity period or before the issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and
- b) Conditions of the tender which are not acceptable to the Department, in such case 25% of the EMD (NIL) will be forfeited by the department.
- c) In case of forfeiture of Earnest Money as prescribed above 6(a), **the tenderer shall not be allowed to participate in the re-tendering process of the work.**

Yours faithfully,

**(SIGNATURE OF THE CONTRACTOR)**

Name and Seal

NAME OF THE PARTNER OF THE FIRM

OR

NAME OF THE PERSON HAVING POWER OF  
ATTORNEY TO SIGN THE CONTRACT  
(CERTIFIED TRUE COPY OF THE POWER  
OF ATTORNEY SHOULD BE ATTACHED)

**E-Tendering Programme****System Tender No. LIC/DDN/Engg/LT-09/2021-22**

1. Online bids are hereby invited for the works mentioned below through online e-Tendering System portal <http://lic.etenders.in> or [www.tenderwizard.com/lic](http://www.tenderwizard.com/lic) **from the intended contractors.**

2. NAME OF WORK: E-Tender for External/Internal Painting & miscellaneous works of B.O. at Rishikesh under D.O.-Dehradun.

**3**

| Sr. No. | Name of Work       | Earnest Money Deposit (EMD) | Tender Document Fee      |
|---------|--------------------|-----------------------------|--------------------------|
| 1.      | As mentioned above | 7200/-                      | Rs. 500/- plus GST @ 18% |

4. Possession of Digital Signature Certificate (DSC) and registration of the contractors on the portal i.e. <http://lic.etenders.in> is a prerequisite for e-Tendering.

5. For Digital Certificate issuance you may please contact our Service provider  
**Antares Systems Limited, 24, Sudha Complex, III Stage, IV Block,  
 Basaveshwara Nagar, Bangalore-560079, Ph: 4048 2113**

6. Last Dates of various activities by bidder:

i) Downloading of Tenders Documents : **10.02.2022, 10:01 Hrs to 23.02.2022, 17:00 Hrs**

ii) Last date of online bid submission : **24.02.2022 up to 15:00 Hrs**

For further details and e-tendering schedule (Key Dates), please visit website above mentioned portal (website)

**Key Dates:**

| Sr. No. | Stage                                                                                                                                   | Start Date and Time         | Expiry Date & Time      |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------|
| 1       | Uploading of Tender documents                                                                                                           | 09.02.2022<br>10:00 Hrs     | 23.02.2022<br>17:00 Hrs |
| 2       | Downloading of Tender Documents                                                                                                         | 10.02.2022<br>10:01 Hrs     | 23.02.2022<br>17:00 Hrs |
| 3       | Deposit of Tender fee in Form of Demand draft/MR (if paid in cash at Cash Counter of LIC of India) in physical form in sealed envelope. | 24.02.2022<br>10:01 Hrs     | 07.02.2022<br>15:00 Hrs |
| 4       | Online submission of tenders                                                                                                            | Up to 24.02.2022, 15:00 Hrs |                         |
| 5       | Opening of tender Fee envelope and opening of Price Bids                                                                                | 24.02.2022 at 15.30 Hrs     |                         |

**LIFE INSURANCE CORPORATION OF INDIA  
DIVISIONAL OFFICE, DEHRADUN**

**INSTRUCTIONS IN REGARD TO ONLINE SUBMISSION OF TENDERS**

**NOTE:** Contractors are requested to note that non-compliance of the following instructions is liable to tender their **tenders non-bonafide**.

**INSTRUCTIONS TO CONTRACTORS REGARDING SUBMISSION OF E-TENDERS**

1. All the Contractors intending to participate in the tenders processed online, are required to get registered for the Electronic Tendering System on the Portal <http://www.tenderwizard.com/LIC>
2. Tender Document can be down loaded from 10.01 Hrs on 10.02.2022 to 17.00 hrs. on 23.02.2022.
3. The Last Date of Submission on- line Bid is up to 15.00 hrs on 24.02.2022.
4. **Obtaining a Digital Certificate:**

The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. Digital signature certificate has two keys i.e. Public Key and Private Key. Public Key is used to encrypt the data and Private Key is used to decrypt the data. Encryption means conversion of normal text into coded language whereas decryption means conversion of coded language into normal text. These Digital Certificates are issued by an approved certifying authority, by the controller of Certifying Authorities, Government of India.

The contractors may obtain Class III digital certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities on the portal <http://cca.gov.in>. or may obtain information and application format and documents required for issue of digital certificate from one such certifying authority given below which is :-

1. TATA Consultancy Services Ltd.  
11<sup>th</sup> Floor, Air India Building, Nariman Point,  
Mumbai-400021 website – [www.tcs-ca.tcs.co.in](http://www.tcs-ca.tcs.co.in)
2. Sify Communications Ltd.  
III Floor, Tidel Park, 4 Canal Bank Road, Taramani, Chennai-  
600113.  
Website – [www.safescrypt.com](http://www.safescrypt.com)
3. MTNL Trustline CA  
O/o DGM (IT-CA), 5515, 5<sup>th</sup> Floor, Core-V Mahanagar  
Doorsanchal Sadan, CGO Complex, MTNL,  
Delhi-110003. Website – [www.mtnltrustline.com](http://www.mtnltrustline.com)
4. iTrust CA (IDRBT)  
Castle Hills, Road No.1, Masab Tank, Hyderabad,  
Andhra Pradesh -500057. Website – [idrbtca.org.in](http://idrbtca.org.in)
5. (n)Code solutions  
301, GNFC Tower, Bodak Dev, Ahmedabad-380054,  
Gujarat. Website – [www.ncodesolutions.com](http://www.ncodesolutions.com)
6. National Informatics Centre Ministry of Communication  
and Information Technology

A-Block CGO Complex, Lodhi Road,  
New Delhi-110003. Website <https://nicca.nic.in>

7. e-Mudhra CA

Infotech Consumer Services Ltd  
3<sup>rd</sup> Floor, Sai Arcade, Outer Ring Road,  
Devarabeesanahalli, Bangalore 560036, Karnataka  
Website – <http://www.e-Mudhra.com>

5. Contractors may **contact the service provider** on following **telephone numbers** or **e-mail address** for any kind of support activities:

|                    |             |                                                                                |
|--------------------|-------------|--------------------------------------------------------------------------------|
| Lokesh H R         | 9686115304  | <a href="mailto:licetenderhelpdesk@gmail.com">licetenderhelpdesk@gmail.com</a> |
| Sowmya             | 08040482133 | <a href="mailto:licetenderhelpdesk@gmail.com">licetenderhelpdesk@gmail.com</a> |
| Raghuprashanth B G | 08040482121 | <a href="mailto:licetenderhelpdesk@gmail.com">licetenderhelpdesk@gmail.com</a> |

**E-Tender helpdesk**

|                                                                                                                                                                           |                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| #24, Sudha Complex,<br>03rd Stage, 04th Block<br>Basaveshwaranagara,<br>Bangalore- 560079<br><a href="mailto:dscprocessingunit@yahoo.com">dscprocessingunit@yahoo.com</a> | <b>Sanjeet Kumar jha</b><br>Tender Wizard New Delhi<br>Office : 011-49424365<br>Mobile: 8800991841 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|

6. In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney to that User. The firm has to authorize a specific individual via an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000.

Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of agency for LIC of India, Divisional Office Dehradun as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm. It shall be the responsibility of management / partners of the registered firms to inform the certifying authority or Sub Certifying Authority, in case of change of authorized user and that a fresh digital certificate is procured and issued an 'authorization certificate' for the new user. The procedure for application of a digital certificate will remain the same for the new user.

The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

7. **Online Viewing of Scheduled date of e-tendering Programme :**

The contractors can view the e-tendering Programme and the time schedule (Key Dates) for all the tenders floated using the electronic tendering system on the website <http://www.tenderwizard.com/LIC>

8. **Submission of Earnest Money Deposit: 7200/-**

( Four thousand only)

9. **Submission of Tender Document Processing Fees:**

Tenderers have to pay Non refundable Tender Document fee of **Rs. 500.00 plus G.S.T. (Rupees Five Hundred only plus G.S.T.)**, payable in the form of

Demand Draft/Pay Order in favour of “ **Life Insurance Corporation of India**” payable at **Dehradun**

A scanned copy of the D.D of Tender document processing fees should be uploaded on e-Tender Portal while Bid Preparation Stage and original DD should be submitted to **Sr Divisional Manager ,LIC Of India ,Nehru Colony Dehradun-248001**, on or before 15.00 hrs 24.02.2022, otherwise Technical Bid /Commercial bid will not be opened.

If the tenders are cancelled or recalled on any grounds, the tender document processing fees will not be refunded to the agency.

#### **10. Download of Tender Documents**

Download of Tender Documents: The tender documents can only be downloaded from the Electronic Tendering System on the Portal <http://www.tenderwizard.com/LIC>

#### **11. Submission of Online Bids:**

The Tenderers need to download the Bids Documents including the Blank Templates/ Formats / Forms etc of Technical & Price Bids. The Technical Bid and Price Bids to be filled without making any changes in the format of the files and the completely filled files of Technical Bid/Price Bid shall be uploaded on the eTender Portal at appropriate Bids using DSC within the time and last date specified for submission of Bids i.e. up to 15.00 Hrs on 24.02.2022. The Scanned copies of self attested supporting documents of Technical Bid /Price Bids to be uploaded while submission of Bids.

#### **12. Opening of Bids: (Tender Document Fee) & Technical Bids/Price Bids:**

The Envelopes of Tender Document processing Fees physically submitted to Sr. Divisional Manager, D.O.Dehradun on or before 15.00 Hrs on 24.02.2022 will be opened at 15.30 Hrs on 24.02.2022. The Technical (Pre-qualification) Bids shall be opened subsequently only of those tenderers who have deposited the Tender Document Processing Fees of requisite amount. If any Tenderer doesn't Deposit Tender Document Processing Fees of requisite amount, their Bids will be treated as Non-Bonafied Bids and shall not be opened for further consideration.

Eligibility related documents of Tenderers who have submitted valid Tender fee Deposit shall be evaluated. Financial Bid (Price Bid) will be opened at 15.30 Hrs on 24.02.2022. The Financial Bid shall be opened in presence of tenderers or their authorized representatives, who attend.

**CONDITIONS OF CONTRACT****1. INTERPRETATIONS:**

- 1.1 In construing these Conditions, the Specifications, the Priced Schedule of Quantities, Tender and Agreement, the following words shall have the meanings herein assigned to them except where the subject or context otherwise requires:
- 1.2 "Employer" shall mean THE LIFE INSURANCE CORPORATION OF INDIA and his (their) heirs, legal representatives, assignees and successors.
- 1.3 "Chief Engineer" shall mean the person occupying the post of head of the Zonal Engineering Department of the Corporation.
- 1.4 "Corporation's Engineers" shall mean such Sr. Divisional Manager, Deputy Chief Engineers, Superintending Engineers and/or Executive Engineers of the Corporation, who shall from time to time be appointed by the Chief Engineer/ SDM for supervising the work carried out by the Contractor or for any purpose in connection therewith:
- 1.5 The term "Site Engineer" shall mean the person appointed and paid by the Employer, acting under the order of the Corporation's Engineer to superintend the work.
- 1.6 The Contractor shall mean the individual, firm or company whether incorporated or not, who is awarded the contract & shall include the legal representative of such individual or the persons composing such firm or company or the successors of such individual, firm or company & the permitted assignees of such individual, firm or company.
- 1.7 The "Site" shall mean the lands/buildings and/or other places on, in, into or through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- 1.8 "This Contract" shall mean the Articles of Agreement, these Conditions, the General Instructions to Contractor, General Preambles to Schedule of Quantities, Special Conditions, the priced Schedule of Quantities, the Specifications, the Appendices, the Drawings and other related correspondence.
- 1.9 "Act of Insolvency" shall mean any act of insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any amends Statute.
- 1.10 "Notice in Writing" or written notice shall mean a notice in written, typed or printed characters, sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.
- 1.11 Words importing persons include Firms and Corporations, words importing the singular only also include the plural and vice versa where the context so requires.

- 1.12 The titles of the Clauses shall not affect or alter the meaning of Clauses and are solely for the purpose of facilitating reference.
- 1.13 The following abbreviations shall be followed for the designations of various LIC Officers:

| <b><u>DESIGNATIONS</u></b>       | <b><u>ABBREVIATIONS</u></b> |
|----------------------------------|-----------------------------|
| Executive Director (Engineering) | E.D. (E)                    |
| Zonal Manager                    | Z.M.                        |
| Chief Engineer                   | C.E.                        |
| Chief Architect                  | C.A.                        |
| Deputy Chief Architect           | D.C.A.                      |
| Deputy Chief Engineer            | Dy.C.E.                     |
| Superintending Engineer          | S.E.                        |
| Senior Architect                 | S.A.                        |
| Executive Engineer               | E.E.                        |
| Deputy Senior Architect          | D.S.A.                      |
| Asstt. Secretary                 | A.S.                        |

- 1.14 Wherever the words “approved”, “directed”, “as required”, “selected” or words of like effect are used, it is to be understood that the approval/direction, requirement or selection of the Corporation’s Engineer are intended unless otherwise specified.
- 1.15 The words “as described” shall mean the description in the Special Conditions, Specifications, General Instructions, Drawings etc. of this tender.
- 1.16 The words “allow” shall mean that the Contractor shall include in his rates for the particular matter referred to.
- 1.17 “Day Work” shall mean items of labour and/or materials which in the opinion of the Corporation’s Engineer are not capable of being evaluated by the accepted method of measurement and analysis.

## **2. SCOPE OF CONTRACT:**

- 2.1** The Contractor shall carry out and complete the works in every respect in accordance with this Contract and in accordance with the directions and to the satisfaction of the Corporation’s Engineer. The Corporation’s Engineer may issue further drawings and/or written instructions, details, directions and explanation in regard to:
- The variation or modification of the Design, quality of works or the addition or omission or substitution of any work;
  - Any discrepancy in the Drawings or between the Schedule of Quantities and/or Drawings and/or Specifications;
  - The removal from the site of any materials brought thereon by the Contractor and the substitution of any other material thereof;

- d. The removal and/or re-execution of any work executed by the Contractor;
- e. The dismissal from the work of any persons employed thereupon;
- f. The opening up for inspection of any work covered thereupon;
- g. The amending and making good of any defects under relevant Clause giving details of defects after completion.

2.2 The Contractor shall forthwith comply with and duly execute all works comprised in such Instructions subject to the provisions of relevant specific conditions of the Contract. In the event of any dispute or difference of opinion the contractor shall refer the matter within 7 (seven) days of the issue of such instruction to the Sr. Divisional Manager / Exe. Engineer whose decision shall be final & binding.

### **3. DISCREPANCIES:**

- 3.1 If there are varying or conflicting provisions made in any one document forming part of Contract, the Sr. Divisional Manager shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
- 3.2 The several documents forming the Contract are to be taken as mutually explanatory of one another, and the order of precedence shall be as follows;
  - a) Special conditions
  - b) General preambles to schedule of quantities
  - c) General instructions
  - d) Conditions of contract
- 3.3 In case of discrepancies between the Schedule of Quantities, the specifications and/or drawings the following order of precedence shall be observed;
  - (a) Description in Schedule of Quantities
  - (b) Specifications of relevant Trade
  - (c) Drawings; detailed drawings shall be followed in preference to small scale drawings and figured dimension in preference to scale.
  - (d) Indian Standard Specifications of 'BIS'.

### **4. DRAWINGS AND SCHEDULE OF QUANTITIES:**

- 4.1 Two complete sets of the Drawings and Specifications and Schedule of Quantities shall be furnished by the employer to the contractor. Two copies of the additional

Drawings, if any, shall be furnished within such time as the Sr.Divisional Manager / Exe. Engineer may consider reasonable which may be necessary for execution of any part of the work. Such copies shall be kept on the work site and the Sr. D.M./ Exe.Engineer and his representatives shall at all reasonable times have access to the same and they shall be returned to the EE by the Contractor on completion of the contract.

This Contract and the signed Drawings, Specifications and Schedule of Quantities shall remain in the custody of the Employer.

**5. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY FOR EXECUTION OF WORK:**

- 5.1 Contractor shall provide everything necessary for the proper execution of the work according to the intent & meaning of the Drawings, Priced Schedule of Quantities and Specifications taken together, whether the same may or may not be explicitly shown or described therein provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancy therein he shall immediately and in writing refer the same to the Sr. Divisional whose decision shall be final and binding on the Contractor.
- 5.2 The Contractor shall supply, fix and maintain at his cost during the execution of any work all the necessary Centering, Scaffolding, Staging, Planking, Timbering, Strutting, Shoring, Pumping, Fencing, Boarding, Watching and Lighting by night as well as by day, required not only for the proper execution and protection of the said work but also for the protection of the Public and the safety of any adjacent Roads, Streets, Cellars, Vaults, Ovens, Pavements, Walls, Houses, Buildings and all other erections, matters or things and the Contractors shall take down and remove any or all such Centering, Scaffolding, Staging, Planking, Timbering, Strutting, Shoring, etc., as occasion shall require or when ordered to do so, and shall fully reinstate and make good all matters and things disturbed during the execution of the work to the satisfaction of the Corporation's Engineer.

**6. AUTHORITIES NOTICES AND PATENTS:**

- 6.1 The Contractors shall conform to the provisions of any Acts of the Legislature relating to the work and to the Regulations and Bye-Laws of any Authority and or any Water, Lighting and other Companies and/or Authorities with whose system the structure is proposed to be connected and shall before making any variations from the Drawings or Specifications that may be necessitated by so conforming give to the SDM/EE written notice specifying the variations proposed to be made and the reasons for making them and apply for instructions thereon.
- In case the Contractor shall not within 7 (seven) days receive such instructions, he shall proceed with the work conforming with the Provisions, Regulations or Bye-Laws in question.

- 6.2 In particular, the Contractors shall be responsible to Register themselves under the Contract Labour (Regulation & Abolition) Act 1970 and Rules there under and any amendment thereto; they must comply with and carry out all the provisions and obligations under the said Act and Rules and furnish all information to Employer as may be required by it and shall indemnify the Employer against any penalties/claims arising from any default on their part.
- 6.3 The Contractor shall arrange to give all notices required by the said Acts, Regulations or Bye-Laws to be given to any Authority and to pay to such Authority or to any Public Office all fee that may be properly chargeable in respect of the work and lodge the receipts with the Employer.
- 6.4 The Contractors shall indemnify the Employer against all claims in respect of patent, rights, and shall defend all actions arising from such claims unless he has informed the Sr. DM/EE before any such infringement and received his permission to proceed and shall himself pay all royalties, license fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof.
- 6.5 The Contractor should observe that his work shall not cause any nuisance to the Public in general and to the neighboring occupants in particular.
- 6.6 Should the Contractor desire to work on Sundays, Holidays and during night hours, permission in writing from the Corporation's Engineer must be obtained in time. It shall be the responsibility of the Contractor to obtain permission from Civil Authorities, if necessary.

**7. SETTING OUT WORK:**

- 7.1 The Contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the corrections of the positions, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress of any part of the work, the Contractor shall at his own cost rectify such error, if called upon, to the satisfaction of the Corporation's Engineer . The Contractor must not commence work until the outlines of the building and Centre line layout have been pegged out and approved by the Corporation's Engineer.

**8. CONTRACTOR IMMEDIATELY TO REMOVE OFFENSIVE MATTER:**

- 8.1 All soil, filth or other matter of an offensive nature taken out of any trench, sewer, drain, cesspool or other place shall not be deposited on the surface, but shall be at once carted away by the Contractor to some pit or place provided by him.

**9. MATERIALS AND SAMPLES:**

- 9.1 All the materials stores and equipment required for the full performance of the Contract must be provided through normal trade channels and must include

applicable import duties and all applicable taxes and other charges, if any. They shall be of approved quality and the best of their kind available and the Contractor must be entirely responsible for the proper and efficient carrying out of the work. The Contractor shall order all materials required for the execution of the work from local as well as from outside sources if situation warrants so as early as necessary to the satisfaction of the Corporation's Engineer and to ensure that such materials are on site well ahead of requirement for use in the work. Non-availability of materials in local market will not be an issue behind slow progress of work.

- 9.2 Before ordering such materials, the Contractor shall get samples of the materials approved well in time. Preference shall be given to ISI marked products and approved

brands of requisite quality as mentioned in the tender. For materials, which are neither approved brands nor ISI marked, the same shall be got tested from approved laboratories at the Contractor's cost before approval. Approved brand and ISI marked product will also be tested if desired by the Chief Engineer and if the test results are satisfactory, the cost of testing shall be borne by the Employer otherwise by the Contractor. No claim will be allowed for delay to the progress of work caused by test. If called upon by the Executive Engineer the Contractor shall produce proof for having arranged for the supply of materials well in time.

- 9.3 The Contractor shall furnish well in time before work commences at his own cost, any samples of workmanship that may be called for by the Corporation's Engineer for his approval and any further samples in case of rejection until such samples are approved. Such samples when approved shall be the minimum standard for the work to which they apply. In case of items like suspended ceiling, partitions, etc. Typical sample panels or proto-types shall be erected in position for approval before undertaking work. Rates quoted shall cover for such preliminary work.

#### **10. ACCESS:**

- 10.1 Any of the Corporation's Engineers or any persons authorized by any one of them shall at all reasonable time have free access to the work and/or the workshops, factories or other places where materials are being prepared or constructed for the Contract and also to any place where the materials are lying or from which they are being obtained and the Contractor shall give every facility to all of them necessary for inspection and examination and test of the materials and workmanship. Except the representatives of the Public Authorities, no person shall be allowed on the work at any time without the written permission of the Corporation's Engineer.

If any work is to be done at a place other than the site of the work, the Contractor shall obtain the written permission of the Corporation's Engineer for doing so.

**11. CONTRACTOR'S SUPERVISION & MINIMUM REQUIREMENT OF TECHNICAL STAFF:**

11.1 The Contractor shall either himself supervise the execution of the contract or may appoint a Competent Agent approved by the Chief Engineer to act in his stead.

11.2 Where the contractor is not a qualified Engineer or even if he is so qualified, he cannot in the opinion of SDM/EE, give his full personal attention to the works, he shall at his own expense employ person(s) possessing the qualification and experience as described hereunder as his accredited agent to supervise the works and to receive instructions from Corporation's Engineers. Any directions, instructions or notices given by the Corporation's Engineer to such supervisor(s) shall be deemed to be given to the contractors.

a. **FOR WORKS COSTING UPTO Rs. 100 LAKHS:**

A qualified resident Engineer having a Government recognized Diploma in Civil Engineering and minimum of 2 years experience on building construction site.

b. **FOR WORKS COSTING MORE THAN Rs. 100 LAKHS & UPTO Rs. 200 LAKHS:**

A qualified resident Engineer having a Recognized Degree in Civil Engineering or equivalent qualification and minimum of 2 years experience on building construction site/s or a recognized Diploma in Civil Engineering with minimum 5 years experience on such construction jobs.

c. **FOR WORKS COSTING MORE THAN Rs.200 LAKHS:**

i) A qualified resident Engineer having a Recognized Degree in Civil Engineering and minimum of 3 years experience of such major construction site/s or a recognized diploma in Civil Engineering with 8 years experience.

ii) In addition the contractor shall employ suitable number of supervisors with recognized degree / diploma in the relevant branches or recognized qualification & experience in the relevant trades for proper execution of the work as approved by the Chief Engineer.

d. The Sr.DM/EE may vary any of the above qualification / experience at his discretion if so warranted by conditions prevailing and applicable to any particular work such as Air-conditioning, HT, Interiors etc.

e. If the contractor fails to employ suitable person(s) to supervise the work or fails to appoint replacement(s) when necessitated, a mount as stipulated in the Appendix to the conditions of contract shall be recovered from the contractor for each Engineer and each supervisor for the period of non-employment.

**12. DISMISSAL OF WORKMEN:**

- 12.1 The Contractor shall, on the instruction of the Corporation's Engineer, immediately dismiss from the work any person employed thereon, who may, in the opinion of the Corporation's Engineer, be unsuitable or incompetent or who may misconduct himself and such person shall not be again employed or allowed on the work without the permission of the Corporation's Engineer.

**13. DATES OF COMMENCEMENT AND COMPLETION:**

- 13.1 The "Date of Commencement" shall be as stated in the Work Order and the Contractor shall thereupon and forthwith begin the work and shall regularly proceed with and complete the same on or before the "Date of Completion" stated in the Work Order, subject to the provisions for extension of time hereinafter contained.

**14. ASSIGNMENT:**

- 14.1 The whole of the work included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or underlet the Contract or any part, share of interest therein nor shall he take a new partner without the written consent of the Chief Engineer and no subletting shall relieve the Contractor from the full and entire responsibility of the Contract or from the active Superintendence of the work during its progress.

**15. DEVIATION, VARIATION, EXTRA/DEVIATED ITEMS AND PRICING:**

- 15.1 The Contractor should note that unless otherwise stated, the tender is strictly on Percentage Rate basis and his attention is drawn to the fact that rates for each and every item should be correct, workable and self supporting. The quantities in the Schedule of Quantities approximately indicate the total extent of work and no variation i.e. additions, omissions or subtractions shall vitiate the Contract. No liability shall attach to the Employer for any error therein or variation there from.
- 15.2 The contractor may when authorized and shall when directed, in writing by the Chief Engineer or the Corporation's Engineers, whom the CE may for that purpose appoint, add to, omit from, make alterations in, substitutions for, or vary the works shown upon the Drawings or described in Specifications or included in the priced Schedule of Quantities but the Contractor shall make no additions, omissions, alterations, substitutions or variations without such authorization or direction. A verbal authority or direction by the Chief Engineer, if confirmed by the contractor in writing within 7 (seven) days, be deemed to have been given in writing.

15.3 The rates of such altered, additional or substituted works shall be determined in accordance with the following.

- a. The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced therein.
- b. The net price of the items in the original tender shall determine the value of the items omitted. However, if omissions vary the conditions under which any remaining items of the work are carried out or if the amount of any omission relative to the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the SDM/EE the net rate or price contained in the Priced Schedule of Quantities or Tender or for any item of work involves loss or expenses beyond that reasonably contemplated by the Contractor and is by reason of such omission rendered unreasonable or inapplicable, The SDM / EE shall fix another rate or price as in the circumstance he shall think reasonable and proper.
- c. If the rate for any altered, additional, or substituted item of work is not specified in the schedule of quantities, the rate for that item shall be derived from the rate for the nearest similar item specified therein.
- d. If the rate for altered, additional or substituted item of work cannot be determined in the manner specified above, then such items of work shall be priced on the basis of coefficients of labor and materials as given in the latest CPWD rate analysis handbook and rates for labor and materials wherever applicable shall be the market rate prevailing at the time of execution.
- e. Where such co-efficient are not available in C.P.W.D. rate analysis, the actual Labor/Materials involved and recorded by the Executive Engineer in executing the items shall be considered.
- f. Where extra work cannot be properly measured or valued, the Contractor shall be allowed "Day Work" prices at the net rates stated in the Tender or the Priced Schedule of Quantities or, if not so stated, then in accordance with the local "Day Work" rates and wages for the district, provided that in either case vouchers specifying the date and time (and if required by the EE the names of workmen employed) and materials incorporated be delivered for verification to the EE or his representative at or before the end of the week following that in which the work has been executed. The EE is not bound to recognize the cost of materials furnished in vouchers; the Chief Engineer at his discretion will fix the price of such materials based upon market value.
- g. While fixing rates of extra items 15% (Fifteen percent only) shall be allowed over & above the basic rate of material (without GST), T&P, Water Charges and labour to cover all supervision, overheads, profits and all other applicable taxes/cess. GST on works contract will be paid separately.
- h. All the quantities given in tender documents are provisional and it may increase or decrease to any instant. There will not be treated as an extra item.**

- i. For all extra items of work, the contractor should submit to the concerned Corporation's Engineer the necessary particulars along with his analysis and the rate he proposes to claim for consideration within a period of 4 (four) weeks from the time of cropping up of any authorized extra / deviated item. He shall also ensure that all the authorized claims are included in the final bill. If the contractor fails to submit his claim within the stipulated period or the period duly extended by the Corporation's Engineer, then the Sr. Divisional Manager shall proceed to fix the rate for the item(s) and the same shall be final and binding on the contractor.
- j. The Contractor shall note that Extra/Deviated items claim and/or any other claim whatsoever if submitted after submission of his Final Bill, will not be entertained and considered by the Employer. The Contractor shall not be allowed to make any Additions/ Alterations/ Revisions / Changes/ Modifications/ Variations in the final bill, after the final bill is submitted by him.

**16. SUB-CONTRACTORS:**

- 16.1 All specialist Merchants, Tradesmen and others, executing any work or supplying, fixing any goods for which provisional sums are included in the Schedule of Quantities and/or Specifications, who may be nominated or selected by the Sr.DM/ EXE.Engineer who shall be the final authority are hereby declared to be Sub-Contractors and are herein referred to as nominated Sub-Contractors.
- 16.2 No nominated Sub-contractor shall be employed on or in connection with the work against whom the Contractors shall make reasonable objection or (save where the Chief Engineer and the Contractor shall otherwise agree) who will not enter into a Contract providing:-
  - a. That the nominated Sub-Contractor shall indemnify the Contractor against the same obligation in respect of the Sub-Contractor as the Contractor is under, in respect of this Contract;
  - b. That the nominated Sub-Contractor shall indemnify the Contractor against claims in respect of any negligence by the Sub-Contractor or his servants or agents or any misuse by him or them of any scaffolding or other plant or the property of the Contractor or under any Workmen's Compensation Act in force.

**17. THIRD PARTY LIABILITY, DAMAGE TO NEIGHBOURING PROPERTY, LOSS OF MATERIAL AND WORKMEN'S COMPENSATION:**

- 17.1 The Contractor shall be responsible for all injury to persons, animals or things, and for all damage to structural and/or decorative part of property which may arise from the operations or neglect of himself or of any Sub-contractor or any of his Sub-Contractor's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of his Contract. This Clause shall be held to include inter-alia, any damage to Building, whether immediately adjacent or otherwise and any damage to roads, streets, footpaths, bridges, or ways as well as all damage caused to the building, and the works forming the subject of this Contract by frost, rain, wind or other inclemency of the weather. The Contractor shall fully indemnify the Employer and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of all and any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of any award or compensation or damages consequent upon such claim.
- 17.2 The Contractor shall fully indemnify the employer against any loss, damage or deterioration for whatever reason, of all materials brought at site and especially material supplied by or paid for partly or wholly by the employer.
- 17.3 The Contractor shall reinstate all damage and loss of every sort mentioned in this Clause so as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of the third parties.
- 17.4 The Contractor shall fully indemnify the Employer against all claims which may be made against the Employer by any member of the Public or other third party in respect of anything which may arise in respect of the works or in consequence thereof.
- 17.5 The contractor shall at his own expense arrange to effect from the date of commencement & maintain till the date of virtual completion of contract, with any licensed general insurance company, a **POLICY OF INSURANCE, Contractor's All Risk Policy (CAR)** to cover all such risks detailed above viz. loss, damage & third party liability etc. The policy shall be of an amount as mentioned in Appendix to Conditions of contract and in the joint names of the employer & contractor and shall be deposited with the employer and renewed as required from time to time during the currency of the contract.
- 17.6 The Contractor shall also fully indemnify the Employer against all claims which may be made upon the Employer, whether under the **WORKMEN'S COMPENSATION ACT** or any other **STATUTE** in force during the currency of

this Contract or at Common law in respect of any Employee of the Contractor or any Sub-Contractor and shall at his own expense effect and maintain until the Virtual completion of the work, with “licensed General Insurance Company” a **POLICY OF INSURANCE** of adequate amount in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the employer & renew the same as required from time to time during the currency of the Contract. As per requirement of the prevalent laws. But the no. of workers covered shall not be less than the numbers mentioned in labour license.

- 17.7 The contractor shall be responsible for anything, which may be excluded from the Insurance Policies above referred to, and also for all other damage to any property arising out of or incidental to the negligence or defective carrying out of the Contract.
- 17.8 The amount of insurance to be taken for the above policies will be jointly decided between the contractor and the employer before issue of acceptance letter based on the tendered cost, nature of work, location of site, local hazards etc.
- 17.9 In default of the Contractor insuring as provided above, or having insured failing to renew the same as required the Employer on his behalf may so insure/renew and may deduct the premiums paid from any monies due or which may become due to the Contractor together with penalty as the Exe Engineer deems appropriate.
- 17.10 The Contractor shall also fully indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings at law and also in respect of any award of compensation of damages arising there from.
- 17.11 The Employer shall be at liberty and is hereby empowered to deduct fully the amount of any damages, compensation costs, charges and expenses arising or accruing any such claim of damage from any sum or sums due or to become due to the Contractor.

**18. DELAY AND EXTENSION OF TIME:**

18.1 If the works be delayed due to any of the following:

- (a) by force majeure,
- (b) by reason of any exceptionally inclement weather,
- (c) by reason of proceedings taken or threatened by, or disputes with, adjoining or neighboring owners, or public authorities,
- (d) by the work, or delays, of other Contractors or Tradesmen engaged by The Employer.

- (e) by reason of any additional work or instruction ordered by the employer,
- (f) by reason of Civil Commotion, local commotion of workmen or strike or lock- out affecting any of the building trades,
- (g) in consequence of the Contractor not having received in due time necessary instructions from the Exe. Engineer for which he shall have specifically applied in writing,
- (h) from other causes which the Exe. Engineer may certify as beyond the Control of the Contractor,
- (i) by reason of non-payment of interim certificate at specified time, then upon the happening of any such event causing delay the contractor shall immediately, give notice thereof in writing to the Corporation's Engineer, but shall nevertheless use constantly his best endeavors to make good this delay.

**18.2 Request for extension of time shall be made by the contractor at the earliest but not later than 14 (fourteen) days of the event causing the delay.**

18.3 In case of strike or lockout the Contractor shall give written notice thereof to the CE as soon as possible but he shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of the CE to proceed with the work.

18.4 The Exe Engineer shall make a fair and reasonable assessment of the delay and grant extension of time accordingly. Such extension shall be communicated to the contractor by the Corporation's Engineer within 3 (Three) months of the date of receipt of such request. Non- application by the contractor for extension shall however not be a bar for giving fair and reasonable extension which shall be as decided by the SDM/Exe Engineer.

18.5 The decision of the Exe. Engineer as communicated by the Corporation's Engineer to the contractor on the extension of time shall be final & binding.

18.6 No claim in respect of compensation or otherwise, howsoever arising, as a result of extension granted under the above conditions shall be admissible.

## **19. DAMAGE FOR NON-COMPLETION:**

### **19.1 COMPENSATION IN THE FORM OF PENALTY FOR DELAY OF WORK :**

The Contractor shall submit a Time and Progress Chart (CPM/ PERT/ Quantified Bar Chart) within 10 (Ten) days of Letter of Intent and get it approved by the SDM/Exe. LIC, Dehradun. The Milestone Chart shall be prepared as produced below in direct relation to the time stated in the contract documents for completion of items of the works. It shall indicate the forecast (milestones) of the dates of commencement and completion of various items,

trades, sections of the work and may be amended as necessary by agreement between the Sr.DM/Exe. Engineer, LIC and the Contractor within the limitations of time stipulated in the Contract documents and further to ensure good progress during the execution of the work, the Contractor shall in no cases in which the time allowed for any work exceeds one month (save for special jobs for which a separate program has to be agreed upon) complete as under :-

**20. FAILURE BY CONTRACTOR TO COMPLY WITH Sr.Divisional Manager / Exe. ENGINEER'S INSTRUCTIONS:**

- 20.1 If the Contractor after receipt of written notice from the Exe. Engineer, requiring compliance with such further Drawings and/or his instructions, fails within 7 (seven) days to comply with the same the Exe. Engineer may employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all additional costs incurred in connection therewith shall be deducted from any money due or to become due to the Contractor.

**21. PAYMENT OF BILLS:**

**a. MEASUREMENT OF WORKS**

- 21.1 1 The EE may, from time to time, intimate the contractor that he requires the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the EE or his representative in taking such measurements and calculations and to furnish all particulars or to give all assistance required by either of them. All items having a financial value shall be entered in the Measurement Book. All measurements and levels shall be taken jointly by the Contractor or his authorized representative and Site Engineer or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by both the parties in token of their acceptance. If any of the measurements recorded are objected by any one of the party, a note shall be made to that effect with reason, signed by both parties and referred to Corporation's Engineer whose decision in the matter shall be final and binding. Measurements has to be recorded through electronic medium as per process elaborated in Annexure M.
- 21.2 Should the contractor not attend or neglect or omit to send such representative, then the measurements taken by the EE or representative shall be taken to be correct measurements of the work. Wherever not specified in the "Schedule of Quantities or elsewhere" the mode of measurements shall be in accordance with the latest brochure issued by the Indian Standards Institutions (now renamed as Bureau of Indian Standards) on "Method of measurement of Building works".
- 21.3 The Contractor or his representative may, at the time of measurement, take such notes and measurements as he may require.
- 21.4 All authorized extra work. Omissions and all variations made without the Exe. Engineer's knowledge if subsequently sanctioned by him in writing shall be included in such measurement.

- 21.5 If the contractor or his authorized representative does not record the measurements periodically for the completed works, then the site Engineer shall take measurements after giving notice in writing of at least 3 (three) days. Measurements recorded in the absence of Contractor shall be intimated with a copy of such measurements to the contractor. If the contractor fails to countersign or record objections within a week from the date of measurement, then such measurement recorded in absence by the Site Engineer shall be deemed to be accepted by and binding on the Contractor.
- 21.6 The Contractor shall, without any extra charge provide all assistance with every appliance, labor and other things necessary for taking measurements (either by him or by site Engineer) and recording levels including test checking of such measurements by any person authorized by the Employer.
- 21.7 All work shall be measured net as fixed in its place. All measurements of „cutting“ shall be held to include for the consequent wastage on the materials used.
- 21.8 Except where any general or detail description of the works expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items for which procedure is not covered in the specification, measurement shall be taken in accordance with the relevant Standard Method of measurement issued by BIS and if for any item no such standard is available then a mutually agreed method shall be followed.
- 21.9 Measurements of all hidden/concealed items of work including extra items if any, such as, work in foundations including excavations, plinth filling, masonry, concrete etc. steel in all R.C.C. work, pipe to be encased etc. shall be jointly recorded by the contractor and Site Engineer or his authorized representative before they are covered up. Immediately after the work is ready for measurements, Contractor will give specific notice to the Site Engineer for recording the measurements. If the Site Engineer or his authorized representative fails to record the measurements, the Contractor will refer the matter to the Corporation's Engineer for instructions, but in no case shall cover up work without the latter's permission.

## **22. PAYMENTS:**

- 22.1 The contractor shall be paid by the Employer, from time to time, by installment under Interim Certificate to be issued by the EE to the Contractor on account of the work executed, when in the opinion of the EE, work to the approximate value named in the Appendix to the conditions of Contract as "Value of work for Interim certificate" (or less at the reasonable discretion of the Executive Engineer) has been executed in accordance with this contract, subject however to a retention of the percentage of such value mentioned in Appendix to the Conditions of Contract hereto as "Retention percentage on account of Security Deposit". The Interim Certificate shall be based upon interim Bills of Running Account Bills to be prepared by the Contractor and supported by the detailed measurements. The EE may include in the Interim Certificate such amount as he may consider proper on account of

materials delivered upon the site by the contractor for use in the work, after satisfying price of materials on basis of vouchers/bills submitted by the contractor.

In case any material have been supplied by the Employer to the contractor in connection with the work, necessary recovery for the same shall be effected from the bills of the contractor by the Exe. Engineer at the issue rates of such materials as stipulated while calling for tenders and in other cases at a stock rate or market rates of such materials, whichever is higher. The contractor will, however, not be entitled to modify his rates for items of work requiring use of such materials and when the work has been virtually completed and the Exe. Engineer shall have certified in writing that it has been so completed on the basis of detailed measurements and after obtaining written endorsement

by the Exe. Engineer that the Exe. Engineer has made a final Scrutiny and that there are no disputed items, rates of quantities, the contractor shall be paid by the Employer in accordance with certificate to be issued by the Exe. Engineer the sum of money named in the Appendix as "Instalment after Virtual Completion" and the contractor shall be entitled to the payment of the final bill in accordance with the final certificate to be issued in writing by the Exe. Engineer with the approval of the Exe. Engineer with expiration of the period referred to as "Defects Liability Period", in the Appendix to Conditions of Contract hereto from the date of Virtual Completion or as soon after the expiration of such period as to work shall have been finally completed and all defects made good according to the true intent and meaning hereof, whichever shall last happen.

Provided always that the issue by the EE of any certificate during the progress of the works or at after their completion shall not relieve the contractor from his liability under

Clause (2) in cases of fraud, dishonesty or fraudulent concealment relating to the work of materials or to any matter dealt with in the certificate in case of all defects and insufficiencies in the work or materials which a reasonable examination would not have disclosed. No certificate of the Exe. Engineer or Executive Engineer shall of itself be conclusive evidence that any work or materials to which it related are in accordance with the contract. The Exe. Engineer may by any certificate make any correction in previous certificate which shall have been issued by the Executive Engineer. Payment upon the EE's certificate shall be made within the periods named in the

Appendix "Period for honoring Interim Certificate" after such a certificate has been delivered to the Employer.

The Exe. Engineer shall have power to withhold any certificate if the work or any part thereof are not being carried out to his satisfaction.

22.2 Provided always that the issue by the Corporation's Engineer of any Certificate during the progress of the works or after their completion shall not relieve the

Contractor from his liability in cases of fraud, dishonesty or fraudulent concealment relating to the work or materials or any matter dealt with in the Certificate in case of all defects and insufficiencies in the work or materials which a reasonable examination would not have disclosed. No Certificate of the Corporation's Engineer shall of itself be conclusive evidence that any work or materials to which it related are in accordance with the Contract.

22.3 Payment upon the Corporation's Engineer's Certificate shall be made within the periods named in the Appendix "Period for honoring Interim Certificate" after such a Certificate has been delivered to the Employer;

22.4 The Exe. Engineer shall have power to withhold any Certificate if the work or any parts thereof are not being carried out to his satisfaction. However, if the final certificate is not issued within the period as mentioned under Clause No.22.5, 26 due to Audit Para by CTE etc., the amount involved for such items of deficient work as decided by Chief Engineer would be with held. The same would be allowed as agreed upon by the CTE & the Exe. Engineer and the final certificate

would accordingly be issued and final bill passed. For such with held amount, a simple interest @ 6% per annum shall be paid to the contractor along with the said payment. Such interest will be calculated from the last date (as mentioned in Appendix to Conditions of Contract) for honoring final certificate till the date of payment.

22.5 The measurements and valuation in respect of the Contract shall be completed within the

"Period of Final Measurement" stated in the Appendix or if not so stated then within six

Months of the completion of the contract works as defined in Clause (26) hereof. No further claim shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished.

22.6 The final certificate shall be based on the submission of final measurements or overall measurements of the work (to be taken if so directed by Corporation's Engineer) with all relevant details similar to 22.1 above. The Exe. Engineer may direct the Contractor to resubmit details if the same are found incomplete to issue the final certificate and his decision to accept the details is final and binding on the Contractor. Final Certificate shall be issued by the SDM/EE after the conditions are met with as per 22.4, 22.5, 22.6 and 26 and contractor's submission of **No Claim certificate cum receipt** as per the Performa given in Appendix to Conditions of Contract.

## **23. SECURED ADVANCE AGAINST MATERIALS**

23.1 The Contractor shall be entitled to be paid advance along with interim bill against materials which are not perishable and which are in the opinion of Corporation's Engineer, required for the works and have been brought on site for incorporation in the work but have not been so incorporated and are safeguarded against loss due to any cause whatsoever, (refer clause no-17). The amount of such advance against materials shall be arrived at on the following basis:

- a) 80% of the market value of materials required for the work and brought on site.

**OR**

80% of the cost of such materials (brought on site) as derived from the relevant accepted tender rate for the particular item involving such materials, whichever is lower.

- b) Such advance payment made against materials shall be recovered from or adjusted from the interim bills as and when the materials are utilized in the work. Examples of certain perishable materials on which no advance shall be paid are Sand, Paint, Bitumen, Hard Boards/Soft Boards and other paper products, Petroleum Products, Coal Tar, and Insulating Boards etc.

23.2 In case of dispute, the decision of the Exe. Engineer on whether advance payment can be made against specific materials shall be final and binding.

## **24. UNFIXED MATERIALS AND EQUIPMENTS:**

24.1 All tools, plants and materials brought to the site by the Contractor shall vest in the and shall not be removed from the site of works except by permission of the Corporation's Engineer in writing. The Employer shall have a lien on these materials and plants.

## **25. REMOVAL OF IMPROPER WORK:**

25.1 The Corporation's Engineer shall during the progress of the work have power to order in writing from time to time the removal from the work within such reasonable time or as may be specified in the order, of any materials, which in their opinion are not in accordance with the Specifications or instructions, the substitution of proper materials and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the Drawings and Specifications or Instructions and the Contractor shall forthwith carry out such an order at his own cost. In case of default on the part of the Contractor to carry out such an order, the Chief Engineer shall have the power to employ other persons to carry out the same and all expenses consequent thereon or incidental thereto as certified by the EE shall be borne by the Contractor and may be deducted from any amounts due or that may become due to the Contractor.

**26. VIRTUAL COMPLETION:**

26.1 The work shall be completed in accordance with the Contract and to the entire satisfaction of Exe. Engineer . All unused materials, tools, plants, scaffoldings, temporary structures, hutments and things belonging to the Contractor shall be removed and the site of works cleared of rubbish and all waste materials by the contractor at his own expenses and delivered up tidy to the employer. After completion of the work, the contractor will serve a written notice to the Chief Engineer to this effect. The Exe. Engineer after satisfying himself shall thereupon approve the virtual completion. The Defect Liability Period shall commence from the date of such certification.

**27. DEFECTS AFTER COMPLETION:**

27.1 The defects, shrinkage, settlements or other faults, which may appear within "the Defects Liability Period, stated in the "Appendix to the Conditions of Contract" or if not stated then, within 12 (twelve) months after virtual completion of the work, arising on account of materials or workmanship not in accordance with the Contract shall, upon the directions in writing of the Corporation's Engineer and within such reasonable time specified therein, be amended and made good by the Contractor at his own cost unless the Exe. Engineer shall decide that he ought to be paid for such amendment and for making good, and in case of default, the Exe. Engineer may employ and pay other persons to amend and make good such defects, shrinkage, settlement or other faults, and all damages, loss and expenses consequent thereon or incidental thereto shall be recovered from any monies due or that may become due to the Contractor. The Exe. Engineer may in lieu of such amending and making good by the Contractors, deduct from any money due or that may become due to the Contractor, a sum to be determined by the Exe. Engineer equivalent to the cost of amending such work. Should any defective work have been done or materials supplied by any Sub-Contractor employed on the work, who has been nominated or approved by the Exe. Engineer as provided in Clause No.16 the Contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subjected to the provisions of this Clause and Clause No.2 hereof. The contractor shall remain liable under the provision of this Clause notwithstanding the payment of any Certificate or the passing of any accounts.

**28. PROVISIONAL SUMS, APPLICATION OF:**

28.1 For all the work listed under items for which provisional sums are provided in the tender, the Exe. Engineer reserves the right to invite separate tenders or select or order from any manufacturer or firms at his discretion and reserves to himself the right of paying direct to persons or firms for any such work. The Contractor will not have any claims over these items, but if tenders are invited for such items, he will also be invited to quote along with others.

- 28.2 If ordered by the Exe. Engineer, Contractor shall be required to carry out provisional sum items at the same conditions and rates as applicable for this Contract.

**29. OTHER PERSONS ENGAGED BY THE EMPLOYER:**

- 29.1 Chief Engineer reserves the right to execute any work not included in this Contract, which he may desire to have carried out, by other persons and the Contractor shall allow all reasonable facilities and the use of his scaffolding and plant for the execution of such work, but is not required to provide any special plant or materials for the execution of such work except by special arrangement with the Employer. Such work shall be carried out in such manner as not to impede the progress of the work included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or be occasioned by such work

**30. SUSPENSION BY THE CONTRACTOR:**

- 30.1 If the Contractor except on account of any legal restraint upon the Employer preventing the continuance of the work, shall suspend the work or in the opinion of the Exe. Engineer shall neglect or fail to proceed with due diligence in the performance of his part of the Contract or if he shall make default in respect of Clause No.2, the Employer shall have the power to give notice in writing to the Contractor requiring that the work be proceeded within a reasonable manner and with reasonable dispatch. Such Notice shall purport to be a notice under this clause. After such notice is given, the Contractor shall not be at liberty to remove from the site of the work or from any ground contiguous thereto any plant or materials belonging to him, which shall have been placed thereon for the work and the Employer shall have a lien upon all such plant and materials to subsist from the date of such notice being given until the notice shall have been complied with. If the Contractor shall fail for 7 (seven) days after such notice given to proceed with the work as therein prescribed, the Exe. Engineer may proceed as provided in Clause No.31.

**31. DETERMINATION OF CONTRACT BY EMPLOYER:**

- 31.1 If the Contractor (being an individual or a firm) commit any "Act of Insolvency" or shall be adjudged as Insolvent or shall make an assignment or composition of the greater part in number or amount of his creditors or shall enter into a deed of assignment with his creditors, or being an Incorporated Company shall have an order made against him or pass an effective resolution for winding up either compulsorily or subject to the supervision of the Court or Voluntarily or if the official Assignee of the Contractor shall repudiate the Contract or if the official Assignee or the Liquidator in any such winding up shall be liable within 7 (seven) days after notice to him requiring him to do so, to show to the reasonable satisfaction of Exe. Engineer that he is able to carry out and fulfill the Contract and if required by the SDM to give security

therefore or if the Contractor (whether an Individual Firm or Incorporated Company) shall suffer execution to be issued or if the Contractor shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the Contractors or if the contractor shall assign or sublet the Contract without the consent in writing of the SDM/E Engineer first obtained or if the Contractor shall charge or encumber this Contract or any payment due or which may become due to the Contractor there under, or if the Exe. Engineer shall certify in writing that in his opinion the Contractor,

- a. has abandoned the Contract, or
- b. has failed to commence the work, or has without any lawful excuse under these conditions suspended the progress of the work for 7 (seven) days after receiving from the Exe. Engineer written notice to proceed, or
- c. has failed to proceed with work with such due diligence and failed to make such due progress as would enable the work to be completed within the time agreed upon, or
- d. has failed to complete the work within the stipulated date including authorized extensions or
- e. has failed to remove the materials from the site or to pull down and replace the work within 7 (seven) days after receiving a written notice from the Corporation's Engineer that the said materials or work were condemned or rejected or
- f. has neglected or failed persistently to observe and perform all or any of the acts, matters, or things, by this Contract to be observed and performed by the Contractor for 7 (seven) days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same, or
- g. has to the detriment of good workmanship or in defiance of the Exe. Engineer "s instructions to the contrary sub-let any part of the Contract.

then and in any of the said causes, the Exe. Engineer not with standing any previous waiver, after giving 7 (seven) days notice in writing to the Contractors, determine the Contract, but without thereby affecting the powers of the Exe. Engineer or the obligations and liabilities of the Contractor, the whole of which shall continue to be in force as fully as if the contract has not been so determined and as if the work subsequently executed had been executed by or on behalf of the Contractor. And further, the Employer, his agents or servants, may enter upon and take possession of the work and all plant, tools, scaffolding, sheds, machinery, steam and other power, utensils and materials, lying upon the premises or the adjoining lands or road and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the work or by employing any other Contractors or other person or persons to complete the work, and the Contractor shall not in any way interrupt or do any act, matter, or thing to prevent or hinder such other Contractor, other persons or person employed for completing and finishing or using the materials and plant for the

work. When the work shall be completed or as soon thereafter as convenient, the Chief Engineer shall give a notice in writing to the Contractor to remove his surplus materials and plant and should the Contractor fail to do so within a period of 14 (Fourteen) days after receipt thereof by him, the Employer may sell the same by public auction and shall give credit to the Contractor for the amount so realized. The Chief Engineer shall thereafter ascertain and certify in writing under his hand what (if anything) shall be due or payable to or by the Employer for the value of the said plant and materials so taken possession of by the Employer and the expense or loss which the Employer shall have been put to in getting the work to be so completed, and the amount, if any, owing to the Contractor and the amount, which shall be so certified shall thereupon be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be and the Certificate of the SDM/ EE Engineer shall be final and conclusive between the parties.

### **32. TERMINATION OF CONTRACT BY CONTRACTOR:**

- 32.1 If payment of the amount payable by the Employer under any Certificate of the EE shall be in arrears as unpaid for 60 (sixty) days after notice in writing requiring payment of the amount with interest of aforesaid shall have been given by the Contractor to the Employer, or if the work be stopped for six months under order of the SDM/EE or by any injunction or other order of any Court of Law, then and in any of the said cases, the Contractor shall be at liberty to determine the Contract by notice in writing to the Employer and he shall be entitled to recover from the Employer payment for all the work executed and for any loss, he may sustain upon any plant or material supplied or purchased or prepared for the purpose of the Contract.
- 32.2 In arriving at the amount of such payment, the net rates contained in the Contractor's original tender shall be followed or where the same may not apply, valuation shall be made in accordance with Clause No.15 hereof.

### **33. DETERMINATION OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK:**

- 33.1 If at any time after the acceptance of the tender, the Employer shall for any reasons whatsoever not require the whole or any part of the works to be carried out, the Chief Engineer shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the Execution of the whole of the works.
- The Contractor shall be paid at contract rates for the full amount of work executed and in addition:
- a. The cost at site of all surplus approved materials collected for incorporation in the work, which the Contractor does not wish to retain and which shall thereafter become the property of the Employer.

- b. Where the Contractor desires to retain the surplus of approved materials (excepting materials supplied by the Employer or obtained in Employer's name, which shall, in any case, be returned to the Employer) the cost of handling and cartage charges for removal from the site to a reasonable distance not exceeding 25kms.
- c. If upon the determination of the Contract under this condition, the Contractor is of the opinion that he has suffered hardship by reason of the operation of these conditions, he may refer the circumstances with full details to the SDM/EE , who on being satisfied that such hardship exists or has existed, shall make such allowance, if any as in his opinion is reasonable, and his decision shall be final, conclusive and binding.

**34. DISPUTES TO BE FINALLY DETERMINED BY SDM/Exe. ENGINEER:**

34.1 The Instruction, Decision, Opinion, Direction, Certificate or Valuation of the Chief Engineer with respect to all or any of the matters under Clause (2), (3), (5), (6), (9), (14), (15), (18), (23), (27), (30), (31) and (33) hereof (which matters are herein referred to as EXCEPTED MATTERS) shall be final and conclusive and binding on the parties hereto and shall be without appeal. Any other Decision, Opinion, Direction, Certificate or Valuation of the SDM or any refusal of the Exe. Engineer to give any of the same shall be subject to the right of Arbitration and review as given under Clause No.36.

**35. SECURITY DEPOSIT AND PERFORMANCE GUARANTEE:**

35.1 Amount towards Security deposit shall be calculated as per details given under Serial No.9 of "APPENDIX TO CONDITIONS OF CONTRACT" in Part-II of the tender. Security Deposit can be either in Cash or in the form of Bank Guarantee.

In case of cash option, the EMD shall be retained as part of Security Deposit and balance Security Deposit shall be accumulated through deductions from Running

Account Bills at 7.5% (maximum) of gross amount of bill. In case of Bank Guarantee option, the Contractor shall furnish one Bank Guarantee for full amount of Security deposit valid till end of defects liability period OR, two Bank Guarantees of like amounts each equal to half the Security deposit; one valid till virtual completion and the other till end of defects liability period. If the EMD is submitted partly in the form of Bank Guarantee and if the contractor desires to avail cash option for Security Deposit ,then the contractor has to deposit the amount equal to the amount of EMD in the form of Bank Guarantee, in the form of Demand Draft/Pay Order drawn in favour of Life Insurance Corporation of India ,payable Dehradun within 21days of intimation to the contractor of acceptance of tender and balance Security Deposit shall be accumulated through deductions from Running Account Bills at 7.5% (maximum) of gross amount of bill.

- 35.2 Performance Guarantee under 9(b) of "Appendix to Conditions of Contract" shall be only in the form of Bank Guarantee valid up to scheduled date of completion.
- 35.3 The Bank Guarantee/s shall be from any Nationalized / Scheduled Bank approved by the Chief Engineer , which is located at the Zonal Office Headquarters of L.I.C within whose jurisdiction the work falls or at the place of work.
- 35.4 Bank Guarantee/s (BGs) against Security Deposit (SD) and Performance Guarantee (PG) shall be executed as per the specimen pro-forma at Annexure B and C. These guarantee/s shall be submitted within 21 (twenty one) days from the date of acceptance letter.
- 35.5 In case of failure by the contractor to furnish the Bank Guarantee against Performance Guarantee as per Cl.35.2 by the stipulated date or extended date if any, Employer shall without prejudice to any other right or remedy available in law, be at liberty to cancel the tender and forfeit the Earnest Money absolutely.
- 35.6 50% of the Security Deposit (cash option) shall be refunded after the certificate of virtual completion is issued to the contractor & provided that the employer has no claim for forfeiture of part or whole of the said deposit.
- 35.7 Balance 50% of Security deposit will be refunded to the contractor after the satisfactory completion of the defects liability period, subject to deductions for any appropriations thereof required to be made by the employer as per the conditions of contract.
- 35.8 If one Bank Guarantee in lieu of total Security Deposit is furnished, the same will be released only after the successful completion of Defects Liability period subject to any appropriations as aforesaid.
- 35.9 If two Bank Guarantees in lieu of Security deposit are furnished, the First Bank Guarantee will be released after the certificate of Virtual completion is issued to the contractor and second shall be released after the satisfactory completion of Defects Liability Period subject to any appropriations as aforesaid.
- 35.10 Bank Guarantees towards Performance Guarantees (where applicable) shall be released after the virtual completion is issued.
- 35.11 Contractor shall keep the Security Deposit and Performance Guarantee, where applicable, replenished to its full value whenever any recovery or appropriation there from occurs. The employer reserves the right to do so from any money(s) due to the contractor lying with them.
- 35.12 The Contractor should note that no interest will be allowed on any part of the Security deposit.
- 35.13 No deductions will be effected from the bills when the total security deposit is paid in the form of Bank Guarantee(s) and the EMD shall be refunded after acceptance of Bank Guarantee(s).
- 35.14 In the event of failure by the contractor to submit Bank Guarantee(s) by the specified / extended date, recovery of Security deposit shall be effected from the R.A Bills. However, where the contractor fails to furnish Bank Guarantee against Performance Guarantee the matter shall be dealt with as per Cl. 35.5 above.

- 35.15 In all cases of Bank Guarantees, there shall be further provision of claim period of 6 months. If the contract period gets extended for any reason whatsoever, the contractor shall obtain the required extensions to the Bank Guarantee(s).

**36. SETTLEMENT OF DISPUTES, ARBITRATION:**

- 36.1 All disputes and differences of any kind whatsoever arising out of or in connection with the contract or the carrying out the work (whether during the progress of the work or after its completion and whether before or after determination, abandonment or breach of the contract) shall be referred a Standing Committee consisting of 1 Retired High Court Judge and 2 Members from Engineering fraternity retiring as senior Engineer from Government / Government Undertaking. The Committee will be constituted by the Chairman, LIC of India.

The Exe. Engineer shall, upon receipt of such reference/s will arrange to enter all such dispute(s) on the date of actual receipt in his office in a register and serially numbered. The receipt of such reference shall be acknowledged by the Office of Exe. Engineer. However mere acknowledgment of receipt of claim does not entail that the claim is admitted or accepted.

- 36.2 The claims arising out of the Contract will be placed before the Committee once in a quarter and decision will be conveyed to both the contractually agreed parties.
- 36.3 Either of the party on being dis-satisfied with the decision may approach to a Three Member Arbitral Tribunal, one each will be appointed by Either Party and 2 appointed Arbitrators will appoint 3<sup>rd</sup> Arbitrator who will act as the Presiding Arbitrator.
- 36.4 Executive Director (Engg.) will appoint the Arbitrator on behalf of LIC of India. The Arbitration shall be conducted in accordance with **Arbitration and Conciliation (Amendment) Act 2015( 3 of 2016) and any other amendment thereafter if any.**
- 36.5 The Contractually Agreed Parties hereby also agree that the Arbitration under this clause shall be a condition Precedent to any Right of Action in Law of Court under the Contract.

**37. LUMP SUM ADVANCE (APPLICABLE TO CONTRACT COSTING Rs.25 LAKHS AND ABOVE)**

- 37.1 Loan will be available if required by the Contractor, and may be given as under on submission of application by him subject to other conditions being fulfilled.
- 37.2 A lump sum amount not exceeding 5% of the Contract sum may be advanced against a Bank Guarantee and at the interest rate as specified in Appendix to the Conditions of Contract, repayable half-yearly-compounded. The advance shall be utilized by the Contractor for the purpose of this Contract only and for no other purpose.

- 37.3 The Bank Guarantee (Performa at Annexure „C“) shall be for the equivalent amount of loan „plus“ simple interest at specified rate plus 1% of loan amount to cover costs. The Bank Guarantee shall be from any Nationalized or approved s c h e d u l e d Bank preferably located at Zonal Head Quarters of LIC or place of work and shall be valid till the date of completion as specified in Appendix to Conditions of Contract.
- 37.4 The amount of loan which may be given to the Contractor shall be at the sole discretion of the Exe. Engineer and may be in one or more installments.
- 37.5 Recovery of the sums advanced by way of loan as above and of interest, thereon shall be made by deduction from the Contractor"s running account bills in suitable percentages in relation to the progress of work as fixed by the Exe. Engineer subject to the condition that entire amount of loan with interest thereon shall be fully recovered by the time the work amounting to 75% of the Contract sum is completed or completion period whichever is earlier. Provided that if at any time the Contractor fails to execute the Contract to the satisfaction of the Employer for any reason whatsoever, the Employer shall be entitled to recall forthwith the entire amount so advanced with interest, cost and legal expenses, etc. and/or recover the whole/balance amount as the case may be, from the bill if any, payable to the Contractor or by enforcing the Bank Guarantee.
- 37.6 Whenever extension of time is granted to the Contractors for the completion of the project and where the loan is not fully recovered, Contractor shall furnish fresh Bank Guarantee for extended period of Contract for the outstanding loan amount together with specified simple interest for the remaining period and 1% of outstanding loan amount towards costs.
- 37.7 Whenever the full amount of loan plus interest has been fully recovered, the Bank Guarantee shall be released.
- 37.8 If the situation so warrants a second loan will be available if required by the contractor subject to the following conditions:
- a) At least 50% of the first loan stands recovered.
  - b) The amount of the loan shall not exceed 5% of the balance amount of work.
  - c) The sum of amount outstanding plus amount of second loan shall not exceed 5% of the total value of work.
- 37.9 All other conditions a p p l i c a b l e to lump-sum advance shall apply for the Second loan also.

## **GENERAL INSTRUCTIONS TO CONTRACTORS FOR WORK**

### **1. DRAWINGS:**

- 1.1 Drawings shall be kept open for inspection at places as mentioned in the letter to the contractor from the SDM/EE. Drawings generally include the site plan, floor plans, elevations and sections of the proposed work.

### **2. INSPECTION OF SITE:**

- 2.1 The Tenderer shall visit and examine the site of work and satisfy himself as to the nature of the existing roads or other means of communication, the character of the soil and of the excavations, the correct dimensions of the work and facilities for obtaining materials and shall obtain generally his own information on all matters affecting the execution of the work. No extra charge made, in consequence of any misunderstanding or incorrect information on any of these points or on the grounds of insufficient description will be allowed. All expenses incurred by the Tenderer in connection with obtaining information for submitting this tender including his visits to site and efforts in compiling the Tender shall be borne by the Tenderer and no claims for reimbursement thereof shall be entertained.

### **3. WHOLE WORK TO BE COMPLETED IN THE SPECIFIED COMPLETION PERIOD:**

- 3.1 The whole work is to be completed within the completion period stated in the Appendix to Conditions of Contract or the extended date of completion, if any. The Contractor will be required if necessary, to work overtime to complete the work by the stipulated date. No extra will be allowed on the Contract sum for such overtime work.

### **4. TIME AND PROGRESS CHART:**

- 4.1 A time and Progress Chart is to be submitted by the contractor according to the activities. The Contractor shall submit his version of time and progress chart fitted within the specified overall period of completion (as stated in Appendix to Conditions of Contract) within 07 (days) days of the communication of acceptance of the tender, to the Corporation's Engineer. In case of contractor does not come forward for any change in the time and progress chart as provided in the General Instruction to the contractors, it shall be presumed that the Time & progress Chart is accepted in full in letter and script to maintain the pace of the progress of the work
- 4.2 Ancillary work should be so started that all such work is completed before the specified overall contractual period of completion.

4.3 The Contractor shall assume full responsibility for any delay in delivery of materials by Merchants or nominated Sub-Contractors not having completed the work in accordance with the Time and Progress Chart. Such excuses shall not form any criterion for extension of time, or any claims by the Contractor.

4.4 Any failure on the part of the contractor to adhere to the starting and completion date of individual items mentioned in the chart shall entail application of the liquidated clause on whole or part at the discretion of the Exe. Engineer, notwithstanding the overall period of completion stated in the appendix to the conditions of contract.

**5. BENCHES:**

5.1 The Contractor is to construct and maintain proper benches to indicate the inter-section of all main walls in order that the lines and levels may be accurately checked at all times. The Contractor shall provide suitable stones with flat tops and build the same in concrete for temporary or permanent benchmarks. All the pegs for setting out the work and fixing the necessary levels required for the execution thereof shall, if desired by the Corporation's Engineer likewise, be built in masonry at such places and in such a manner as the Corporation's Engineer may determine. Contractors' rates shall cover for these factors.

**6. DRAWINGS ON SITE:**

6.1 The Drawings maintained on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved transparent varnish or laminated at the cost of the Contractor. They are to be protected from the ravages of termites, ants, silver fish and other insects.

**7. ORDER OF WORK:**

7.1 The Chief Engineer reserves the right to fix the order in which the various items of work involved in this Contract is to be executed and Contractor shall comply with the same. There shall be no extra claims on account of this.

**8. WORKMANSHIP:**

8.1 The Work calls for a high standard of workmanship combined with speed.

**9. REJECTED WORKMANSHIP OR MATERIALS:**

9.1 Any workmanship, or materials not complying with the specific requirements or approved samples, or which have been damaged, contaminated or deteriorated, must be removed immediately from the site and replaced at the Contractor's expense as directed.

**10. QUOTED RATES:**

**The tenders shall be percentage rate tender.**

10.1 Contractor should note that unless otherwise stated the tender is strictly on Item rate basis and his attention is drawn to the fact that quoted Item Rate should be correct, workable and self supporting.

10.2 If called upon by the Exe. Engineer, the details analysis of quoted Item Rate shall be submitted by the Contractor. The Exe. Engineer is not bound to recognize Contractor's analysis and reserves the right to reject abnormal high Item Rate quoted by the Contractor. In case there are inconsistencies in the rate of item of same description, in the different parts of Schedule of Quantities, the lowest of such rates shall be considered unless Exe. Engineer finds that there is justification for such inconsistent rates.

**11. WATCHING AND LIGHTING:**

11.1 The Contractor from the time of being placed in possession of the site must allow for watching, lighting and protecting the work, the site and surrounding, properly by day and night on all days including Sundays or other holidays, at his own cost.

**12. WATER:**

12.1 The rates quoted by the Contractors shall include for providing all water required for the work including that required by special tradesmen and Sub-Contractors and pay all charges required by Local Municipal or other Authorities. Water must be clean, fresh, pure and free from earth, vegetable or organic matters, acid or alkaline substance in solution or suspension. The Contractors shall make their own arrangements for water supply. If supply from the Municipality or other local bodies be inadequate, the Contractor should provide tube well or wells or open well at his own cost. The Contractors must execute any temporary plumbing and pay all fees and charges. All health regulations in force shall be strictly observed by the Contractor and pay all necessary charges.

However, water is available in surplus with LIC, the same may be permitted for use in work and in such case necessary recovery will be effected from contractor's bill as detailed below:

**Recovery of water charges from Contractors bill if used from LIC source @ 0.25% of the Gross value of work done.**

**13. ELECTRICITY:**

- 13.1** The Contractor shall arrange with the concerned Electricity Supply Authorities for a temporary meter and supply to the site and shall provide all temporary wiring, power and lighting points for the whole of the works and clear away when no longer required. He shall pay all charges for the same and for electricity consumed, including that consumed by Sub-Contractors. **The Contractor should submit disconnection & no dues certificate from the supplying authority along with his final bill.**

However, Where existing source of Electricity is available in surplus with LIC, the same may be permitted for use in work and in such case necessary recovery will be effected from contractor's bill as detailed below:

**Recovery of Electricity charges from Contractors bill if used from LIC source @ 0.25% of the Gross value of work done.**

**14. OFFICE FOR CORPORATION'S ENGINEER ON SITE:**

- 14.1** The Contractor shall at his cost, provide a separate office (of suitable size) for the Corporation's Engineer/s on site with writing tables, chairs, electric lights and fans, drinking water arrangements, etc. as directed by the Executive Engineer and clear away at completion of work and make good all work disturbed and pay all charges. The Contractor shall also provide facilities for having the Corporation Engineer's office cleaned every day and kept in good and hygienic condition.

**15. OFFICE ACCOMMODATION FOR CONTRACTOR'S STAFF :**

- 15.1** The Contractor shall, at his cost, provide, fit-up and maintain in an approved position proper office accommodation for his representative and staff, which offices shall be open at all reasonable hours to receive instructions, notices or communications and clear away on completion and make good all work disturbed.

**16. SECURITY AND PROTECTION:**

- 16.1** The Contractor shall at his cost, provide any necessary temporary enclosures, gates, entrances, etc. for the protection of the work and materials and for altering and adapting same as may be required and removing at completion of the works and making good all works disturbed.
- 16.2** During inclement weather, the Contractor shall suspend concreting or plastering for such time as the Corporation's Engineer may direct and shall protect such work in course of execution from damage by approved measures.

- 16.3 Should the work be suspended by reason of rain, strike, lock-outs or any other cause, the Contractor shall at his cost take all precautions necessary for the protection of the work and shall make good any damage arising from any of these causes.
- 16.4 The Contractor shall at his expense cover-up and protect from injury from any cause, all new work and supply all temporary doors protection to windows, and any other requisite protection for the whole work executed, whether by himself or special tradesmen of Sub-Contractors and any damage caused must be made good by the Contractor at his own expense.
- 16.5 All fences, trees, shrubs, grasses, lawn and other surfaces around the buildings or approaches thereto, which are required to be maintained are to be kept free from damage due to operations in connection with the work, at Contractor's expense.
- 16.6 The Contractor shall, at his expense, protect all projecting sills, jambs, copings, stone or concrete treads and moldings and all concrete steps, wood work and joinery and the like from injury during the progress of the work.
- 16.7 The Contractor shall at his cost, protect joinery and make good all damages to the same from any cause whatsoever during the performance of the Contract and leave perfect to the satisfaction of the SDM at completion. Before giving possession, the Contractor must see that all doors, windows and ventilation etc. work easily and shall make all necessary adjustments for such smooth working.

**17. SANITATION:**

- 17.1 The Contractor shall at his cost provide adequate latrine facilities and keep the same in a clean and hygienic condition to the satisfaction of the Public Health Authorities and shall cause such latrine and night soil to be cleared away whenever necessary and shall make good all works disturbed by these conveniences.

**18. MINIMUM WAGES ACT:**

- 18.1 The Contractor shall pay rates of wages and observe hours of work and conditions of employment to existing rules under Minimum Wages Act. Further, it shall be Contractor's responsibility to ensure that he pays his workmen wages, which are not lower than the minimum prescribed by the Union Government and State Government in which area this Contract, is being operated.

**19. SHEDS FOR MATERIALS:**

- 19.1 The Contractor shall at his cost provide and maintain proper approved sheds for the storage and protection of materials etc. and other work that may be executed on the site including the tools and materials of Sub-Contractors and remove on completion. Sheds for storage of Cement are to have floors raised from the ground.

**20. TEMPORARY ROADS:**

- 20.1** The Contractor shall, at his expense, provide such temporary roads on the site as may be necessary for the proper performance of the Contract and for his own convenience but not otherwise. Upon completion, such roads shall be broken up and levelled where so required by the Drawings at Contractor's expense unless the CE shall otherwise direct.

**21. OBJECTS OF VALUE AND ANTIQUITY FOUND ON SITE:**

- 21.1** All objects of value or antiquity found on the site shall remain the property of the Employer and such findings shall be immediately reported to the Chief Engineer.

**22. WORKS AND SITE TO BE KEPT AND DELIVERED UP CLEAN:**

- 22.1** All shavings, cuttings and other rubbish as it accumulates from time to time during the progress of the work and at completion, including that of Sub-Contractor and special tradesman to be cleared and carted away. All rejected materials shall be removed. Contractor's quoted rates shall allow for these factors.

**23. USEFUL EXCAVATED MATERIALS:**

- 23.1** Any sand, gravel, moorum or rock taken from excavation will remain the property of the Employer and in the event of it not being allowed to use in the work, the Employer reserves the right to dispose it off in any way he wishes or to direct the Contractor to cart it away as ordinary materials.
- 23.2** Should suitable sand or gravel or morang or rock be found in the excavations and the Contractor be allowed to use the same in the work, in place of materials to be brought by him from outside he will be required to pay the Employer the full market value of the same.

**24. SIGN BOARD AND HOARDINGS:**

- 24.1** The Contractor shall not affix or place any placards or advertisement of any description or permit the same to be affixed or placed in or upon any hoarding, gantry, buildings or structure other than that approved by the Chief Engineer.

**25. SCIENTIFIC AND MEASURING INSTRUMENTS:**

- 25.1** Theodolite, levelling instruments, prismatic compass/chain, steel and metallic tapes and all other surveying instruments found necessary on the works, shall be provided by the Contractor at his expense for the due performance of this Contract as instructed by the Corporation's Engineer.

**26. TOOLS FOR MASONS:**

- 26.1** Every bricklayer or plasterer on the work shall be provided with suitable level, battens, trowels, wooden floats and breaking hammers for cutting bricks and templates, to enable him to carry out the work in a neat and workman like manner and each gang of brick layers or plasterers not exceeding six in number shall be provided with a suitable measuring rule, a plumb bob, a spirit level and a square in addition to the above mentioned, all to be to the approval of the Site Engineer.

**27. CONTRACTOR'S MISTRIES AND SUPERVISORS:**

- 27.1** The Contractor's Masson and the Supervisors on the works shall carry with them a suitable measuring rule, a measuring tape, a spirit level, a plumb bob and a square and shall check the work of the bricklayer, plasterers, and carpenters and joiners to see that the work is being done according to the Drawings and Specifications. The Corporation's Engineer/Supervising Staff will use any and all measuring instruments or tools belonging to the Contractor as he chooses, while checking the work executed or being executed on the works.

**28. NO OVER LOADING OF SLABS:**

- 28.1** Floors of buildings under construction shall not be loaded by stacks of materials during construction without the prior approval of Corporation's Engineer. It is important that no load comes on the reinforced concrete floors until they are at least three weeks old and at no time must the load placed upon them exceed the load for which they are designed.

**29. ALTERNATIVE ITEMS:**

- 29.1** In regard to alternative items, if any, specified in the Schedule of Quantities, Contractor should note that the Employer reserves the right to order the Principal item or its alternatives at the CE's discretion.

**30. ATTENDANCE ON SUB-CONTRACTORS:**

- 30.1** Co-ordination: The Contractor shall be responsible for the co-ordination of all the work including that of Sub-Contractors, for arranging runs of all services and working to the requirements and layout of the specialist trades, in all matters necessary for the complete execution of the work.
- 30.2** Rates quoted by the Contractor shall be inclusive of all attendance on Sub-Contractors or other Contractors nominated by the Employer. Contractor must allow for provision of the use of his scaffolding to Sub-Contractors and for its retention until such time all relevant Sub-Contract works are completed.

- 30.3** The Contractor shall accept liability for and bear the cost of the supply of all necessary water, electricity, lighting, watching etc. for the Sub-Contractors work.
- 30.4** The Contractor must allow in his rates for making good any holes and chases left by the Sub-Contractors or other Contractors nominated by the Employer before the Builder's Work is completed and handed over
- 30.5** The Contractors shall, at all times, give access to workmen employed by the local or other authorities or any men directly employed on the buildings and to provide such parties with proper, sufficient, and if required, special scaffolding, hoists and ladders and provide them with water and lighting, and leave or make any holes, grooves etc. in any work directed by the Chief Engineer, as may be required, to enable such workmen to lay or fix pipes, electric wiring, special fittings etc. Contractor's quoted rates shall allow for these factors.

**31. OCCUPATION BY EMPLOYER:**

- 31.1** The Employer reserves the right to occupy the works by sections as completed, as may be considered by the Exe. Engineer both practicable and reasonable and without hindrance to the Contractor's progress.

**32. TAXES, DUTIES, LEVIES AND DEDUCTION AT SOURCE:**

- 32.1** The contractor shall be responsible to pay all statutory taxes / levies imposed by the State and Central Government from time to time. It is deemed that the rates quoted by the contractor for each item of works include all applicable taxes except GST on works contract which shall be reimbursed by LICl as applicable from time to time as per notification of Govt. of India.
- Liabilities towards GST for Contractor and Employer shall be in accordance with relevant provisions of the **Central Goods and Service Tax Act 2017** or any amendment issued by concerned Authority from time to time.
  - Rates are inclusive of all the taxes & levies such as Income Tax & Labour Cess etc. but excluding GST. The payment of GST shall be made separately in part or full to contractor / concerned authority as per the rates, rules & procedure prevailing at the time of bills payment.
  - Payment of GST to contractors can be made along with the bills payments after the invoice is raised & uploaded by the contractors on the GST portal & tax is paid to the credit of Government.

- All the participating bidders must have valid GST Registration Certificate of Particular state/ Union Territory at the time of submission of bid. In the eventuality of not having valid GST registration Certificate with the State / Union Territory, where Implementing works Contract, the successful bidder will be required to obtain GST Registration Certificate of that Particular State / Union Territory where the Works Contract will be implemented within a period of 07 days from the date of issuance of Letter of Acceptance, failing which the letter of Acceptance will be withdrawn and cancelled. Earnest Money deposit will also be forfeited. No extension of time period will be given whatsoever unless there remain unforeseen impediments with the issuing Authority of such GST Registration.
- All the bidders are required to submit a copy of the GST Registration number provided by the relevant authority.
- Deduction at source of Income tax and Labour Cess etc. shall be made by LIC of India as per the provisions prevailing from time to time from the Running Account or Final Bills and remitted to the concerned Taxation Authorities/ State Government on behalf of the contractor.
- **The clauses given above will supersede all the provisions given in the tender elsewhere regarding any taxes /levies and GST.**

**32.2** Deduction at source of Income Tax, all other statutory taxes as applicable and Labour Cess shall be made by LIC of India as per statutory provisions prevailing from time to time, from the Running Account/ Final Bills and remitted to the concerned Taxation Authorities /State Government on behalf of the contractor.

**ANNEXURE – „A“****PROFORMA FOR  
ARTICLES OF AGREEMENT**

ARTICLES OF AGREEMENT made at.....this.....day of .....20.....  
between THE LIFE INSURANCE CORPORATION OF INDIA, a body corporate constituted and  
established by the Life Insurance Corporation Act,  
its Zonal Office at..... hereinafter called the Employer (which expression shall include its  
successors and

assignees wherever context or meaning shall so require or permit) of the one part and M/s  
.....( hereinafter called "**The Contractor**" ) of the other part.

WHEREAS the Employer is desirous of constructing  
the.....

and has prepared drawings and specifications and the Schedule of Quantities which have been  
signed by or on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute upon and subject to the conditions  
and instructions set forth herein ( hereinafter referred to as "**the said Conditions**") the works  
shown upon the said drawings and /or described in the said Specifications and included in the said  
Abstract Schedule of Quantities at the item rates therein set forth amounting to the contract sum of  
Rs..... hereinafter referred to as "**the said contract Amount**".

**NOW IT IS HEREBY AGREED AS FOLLOWS:**

1. In consideration of the said Contract Amount to be paid at the times and in the manner set forth in the said conditions, the contractor shall upon and subject to the said Conditions execute and complete the works shown upon the said Drawings and described in the Specifications and/or the priced Schedule of Quantities.
2. The Employer shall pay the contractor the said Contract Amount or such other sum as shall become payable for the items and in the manner hereinafter specified in the said conditions.
3. The said Conditions and Appendices thereto shall be read and construed as forming part of this Agreement, and the parties hereto shall respectively abide by and submit themselves to the conditions and perform the Agreement in their part respectively in such conditions contained.
4. All disputes arising out of or in any way concerned with this Agreement shall be deemed to have arisen in \_\_\_\_\_ and only the Courts in \_\_\_\_\_ shall have jurisdiction to determine the same.
5. The contract comprises :-
  - i) Tender Documents Serial Pages.....
  - ii) Subsequent Correspondence Serial Pages.....
  - iii) Architectural Drawings Serial Pages .....
6. Only ( ) alterations have been made in these documents and as evidence that these alterations were made before the execution of Contract Agreement, they have been initialed by the contractor and.....

.....Engineer, \_\_\_\_\_ Zone, Life Insurance Corporation of  
India \_\_\_\_\_. The said officer is hereby authorized to sign and initial on the  
Employer's behalf, the documents forming part of this contract.

7. IN WITNESS WHEREOF THE Official seal of the LIFE INSURANCE CORPORATION OF INDIA, \_\_\_\_\_ ZONE, was thereto affixed and signed on its behalf by the Chief Engineer and by \_\_\_\_\_ on behalf of the Contractor/s on the dates respectively mentioned against their signatures in the presence of the witnesses whose signatures are also appended.

In the presence of

Sr.Divisional Manager

1. Signature : .....

FOR AND ON BEHALF OF THE  
LIFE INSURANCE  
CORPORATION OF INDIA

Name : .....

Date : .....

Address : .....

.....

2. Signature : .....

Name: .....

Address : .....

.....

In the presence of .....

1. Signature : .....

FOR AND ON BEHALF OF THE  
CONTRACTOR  
M/S .....

Name : .....

## **TECHNICAL SPECIFICATIONS FOR CIVIL & INTERIOR WORKS**

### **1. CONCRETE WORK**

#### **GENERAL :**

P.C.C shall mean Plain Cement Concrete.

R.C.C. shall mean Reinforced Cement Concrete.

R.M.C shall mean Ready Mixed Concrete

1. All concrete specified in this tender shall be ordinary mix./ Design Mix/ Ready Mix concrete.

2. **MIXES OF CONCRETE:**

Concrete used shall be in volumetric mix such as 1:4:8, 1:3:6, 1:2:4, 1:1.5:3, 1:1:2, etc.  
(Cement: Sand: Stone Chips).

3. **WORKABILITY:**

Workability of concrete should be controlled by direct measurement of water content, making allowance for any surface water in the fine and coarse aggregates. The slump test or compacting factor test shall be carried out at intervals as directed by the Corporation's Engineer. The slump test is suitable for slump of 5 cm. to 15 cm.

4. **ALLOW IN RATES FOR CONCRETE ITEMS:**

Apart from various factor mentioned elsewhere in the tender, rates quoted for all concrete items shall include for:-

- a) All labour, materials, use of equipments, tools and plants etc.
- b) All necessary operations for the proper volume batching, mixing, handling, transporting, placing, directed, hacking of concrete surfaces where they have to receive plaster (but the plaster on concrete surfaces shall be measured and paid separately under respective plaster items) etc.
- c) Pouring concrete around reinforcement for reinforced concrete work but reinforcement shall be measured and paid for separately, unless otherwise stated in the tender.
- d) Rates quoted for all concrete items shall include for concreting of structural members of any shape and sections as per drawings including providing slopes to slabs, beams, chajjas, canopies etc. wherever required. Form work shall be measured and paid separately.
- e) Allowing work of another agencies being carried out by them like laying conduits, boxes, pipes, clamps etc. as directed before laying concrete and coordinating with other agencies viz, electrical, sanitary ,air conditioning and ventilation Contractor and other agencies working on site.
- (f) Filling the bolt holes (of the shuttering) on concrete surface with cement mortar (1:3) and finishing the same as directed.

**5. FORM WORK:**

- a) Irrespective of what is stated in general specifications for builder's work, trade preambles for "CONCRETE", contractor's rates quoted for concrete items shall be exclusive of form work. Formwork for all concrete items shall be measured and paid for separately. Form work or shuttering shall be water tight and for all concrete of mix 1:2:4 and higher grades shall be of timber/Steel/Plywood unless otherwise specified. Area of shuttering in contact with concrete surface shall be measured for payment purposes.
- b) Unless otherwise stated, rates quoted for formwork shall include columns /slabs /beams etc. at regular floor heights upto 3.5 meter or at smaller heights as shown on the drawings.
- c) The materials used for shuttering, if not confirming to the specifications required for providing waterproof shuttering, shall be rejected.
- d) For the purpose of measurement of formwork for external side of external/end beams full heights from top of slab to bottom of beams shall be considered under formwork for the beams.

**6. ALLOW IN RATES FOR FORM WORK:**

Apart from various factors mentioned elsewhere in the tender, rates quoted for the formwork items shall include for:-

- a) All labour, materials, use of equipments, tools, nails, bolts, screws, Centering, oiling etc. required for formwork specified in the tender.
- b) All necessary operation for the proper erection and removal of the formwork when directed.
- c) For necessary provision in the formwork for forming holes and pockets for bolts, balusters, for taking out dowels bars, fan hooks and for other inserts in the concrete as shown including making provisions for other large size openings for doors/ windows/ ventilators/grills etc. in the walls.
- d) For formwork of any shape and sections as per drawings including providing necessary slopes, camber to slab, etc. wherever required.
- e) For necessary provisions in the formwork for forming chamfers, bands, splays, drip moulding, rounded or curved angles, chases, grooves, rebates, making notches, dowels etc. in the concrete wherever directed.
- f) For making construction joints and dummy joints as directed.
- g) Work involving plain or circular, straight or curved forms or in slopes etc. as directed.
- h) Sinking of formwork wherever shown on drawings.

7. **CEMENT SHOULD CONFORM TO FOLLOWING STANDARDS (IS: 269-1976 / IS: 8114) / IS: 455:**

a) **FINENESS:**

When tested for fineness in terms of specific surface by Blaines' air permeability method as directed in IS:4031-1968, the cement shall comply with the following requirements:

| Type of Cement | Specific Surface Sq/Cm/g |
|----------------|--------------------------|
| Ordinary       | Not less than 2250       |
| Low heat       | Not less than 3200       |

b) **SOUNDNESS:**

b.1. When tested by the 'Le Chatelier' method described in IS:4031-1968, unaerated ordinary and low heat Portland cements shall not have an expansion of more than 10mm.

b.2. In the event of the cement failing to comply with the above requirement, a further test shall be made by the 'Le Chatelier' method described in IS:4031 - 1968, from another portion of the same sample, after aeration, by being spread out to a depth of 75mm at a relative humidity of 50 to 80 % for a total period of 7 days, when the expansion of each of the two types of cements mentioned above, shall not be more than 5mm.

b.3. Un aerated ordinary and low heat Portland cements having a magnesia content of more than 3 % shall be tested for soundness by autoclave test described in IS:4031-1968 and shall not have an expansion of more than 0.8%. However, if specified by the purchaser at the time of placing the order, cements having a magnesia content of less than or equal to 3%, shall be also tested for autoclave expansion as described in IS:4031-1968 and shall not have an expansion of more than 0.8%.

c) **SETTING TIME:**

The setting time of the cements, when tested by the Vicat apparatus method described in IS: 4031-1968 shall confirm to the following requirements:

|                                                   | <u>Ordinary</u> | <u>Low heat</u> |
|---------------------------------------------------|-----------------|-----------------|
| i) Initial setting time in Minutes, not less than | 30              | 60              |
| ii) Final setting time in Minutes, not more than  | 600             | 600             |

d) **Compressive Strength:** The average compressive strength of at least three mortar cubes (area of face 50 Sq.cm.) composed of one part of cement, three parts of standard sand (Confirming to IS: 650-1966) by mass and P/4 + 3 % (of combined

mass of cement plus sand) water and prepared, stored and tested in the manner described in IS: 4031-1968 shall be as follows:

| Kgf/SqCm.                  | Ordinary | Low Heat |
|----------------------------|----------|----------|
| a) 72 + 1h, not less than  | 160      | 100      |
| b) 168 + 2h, not less than | 220      | 160      |
| c) 672 + 4h, not less than | -        | 350      |

Note 1: Standard sand shall confirm to IS:650-1966

Note 2: P is the percentage of water required to produce a paste of standard consistency.

**8. WATER PROOFING COMPOUND:**

Cement water proofing compound wherever mentioned in the items shall be "IMPERMO" manufactured by M/s SNOWCEM (India Ltd.), 2% by weight of cement or "CICO" waterproofing compound manufactured by M/s STRUCTURAL WATERPROOFING Co. Pvt. Ltd., Kolkata, 3% by weight of cement or other equal and approved as per Manufacturer's Specification and rates quoted shall include for the same (As per approved materials).

**9. MATERIALS: ALL MATERIALS SHALL BE OF APPROVED QUALITY.**

**10. AGGREGATES:**

Aggregates shall conform to IS:383/1970 and IS:2386-1963 and shall be from approved sources.

**11. LOADING OF FLOOR SLABS:**

Materials shall not be stored or stacked on suspended floors and roofs without the Corporation's Engineer's prior approval.

**12. WATER :**

Water used for both mixing and curing shall be potable and free from injurious amounts of deleterious materials which are likely to affect the strength or durability of concrete. Water containing any sugar shall not be allowed for use. Also, water which fails to satisfy the following requirements shall be not be used

- To neutralize 100 ml. sample of water, it should not require more than 5 ml. of 0.2 normal HCL.
- To neutralize 100 ml. sample of water, it should not require more than 25 ml. of 0.02 normal H<sub>2</sub>SO<sub>4</sub>.
- Water should not contain solids in excess of the following :-

|                                |                         |
|--------------------------------|-------------------------|
| Organic                        | 200 mg/ltr.             |
| Inorganic                      | 3000mg/ltr.             |
| Sulphate (as SO <sub>4</sub> ) | 400mg/ltr.              |
| Chloride (as Cl)               | 2000mg/ltr. (for P.C.C) |
| Chloride (as Cl)               | 500 mg/ltr. (for R.C.C) |
| Suspended matter               | 2000mg/ltr.             |

The PH value of water shall be between 6 to 8.

**13. SAMPLES AND TEST:**

Every facility shall be provided to enable the Corporation's Engineers to obtain samples and carry out test on the materials of construction, if these tests show that any of the materials of construction do not comply with the requirements of this specification, the Contractor will be responsible for the cost of the tests and the replacement of the defective materials and/or construction.

**14. REJECTED MATERIALS:**

All materials which have been damaged contaminated or have deteriorated or do not comply in any way with the requirements of the specifications shall be rejected and shall be removed immediately from the site at the Contractor's own expense.

**2.0 BRICK WORK****2.1 BRICKS :**

- a. The bricks shall be table moulded first quality of regular and uniform size, shape and colour, uniformly well burnt through out but not over burnt. They shall have plane rectangular faces with parallel sides and sharp, straight and right angled edges. They shall be free from cracks or other flaws. They shall have a frog of 10 mm depth on one of their first faces.
- b. They shall give a clear metallic ringing sound when struck.
- c. They shall show a fine grained, uniform, homogeneous and dense texture on fracture and be free from lumps of lime, lamination, cracks, airholes, soluble salts causing efflorescence of other defects which may in any way impair their strength, durability, appearance or usefulness for the purpose intended. They shall not have any part under burnt. They shall not break when thrown on the ground on their flat face in a saturated condition from a height of 60 cm.
- d. Bricks of one standard size shall be used on one work unless specially permitted by the Executive Engineer. In part of Eastern Zone (i.e., West Bengal, Assam, Odisha and Bihar etc.) bricks which are commonly of size 25 x 12.5 x 7.5 cm. shall be used. The following tolerances are permitted in the standard conventional size adopted on a particular work :-

---

|         |               |                     |
|---------|---------------|---------------------|
| Length  | Plus or minus | 3mm (about 1/8")    |
| Breadth | Plus or minus | 1.5mm (About 1/16") |
| Depth   | Plus of minus | 1.5mm (About 1/16") |

---

- e. After immersion in water, absorption by weight shall not exceed 20 percent of the dry weight of the brick when tested according to I.S.S. No. 1077-1976.
- f. Unless otherwise specified, the load to crush the brick when tested according to I.S.. No. 1077-1976 shall not be less than 50 Kg / Sq.cm.

## 2.2 **MORTAR :**

Unless otherwise specified, mortar for brick work shall be composed of 1 part of cement to 5 parts of coarse approved sand for walls of one brick thick (i.e., 23 cms.) and over and one part of cement to 4 parts of coarse approved sand for half thick wall. Other specifications for mortar in brick work shall be as per I.S.S. 2116-1965.

The particle size grading of sand in mortar for unreinforced masonry work shall be within the limits specified below :-

| I.S. Sieve designation | Percentage by weight Passing I.S. Sieve. |
|------------------------|------------------------------------------|
| 4.75 mm                | 100                                      |
| 2.36 mm                | 90-100                                   |
| 1.18 mm                | 70-100                                   |
| 600 micron             | 40-100                                   |
| 300 micron             | 5-70                                     |
| 150 micron             | 0-15                                     |

## 2.3 **CONSTRUCTION DETAILS :**

### a. **SOAKING :**

All bricks shall be immersed in water for two hours before being put into work so that they will be saturated and will not absorb water from the mortar.

### b. **BATS:**

No bats or cut bricks shall be used in the work unless absolutely necessary around irregular openings or for adjusting the dimensions of different course and for closers, in which case, full brick shall be laid at comers, the bats being placed in the middle of the course.

### c. **LAYING :**

The bricks shall be laid in mortar to line level and shapes shown on the plans, slightly pressed and thoroughly bedded in mortar and all joints shall be properly flushed and packed with mortar and no hollows left anywhere. Bricks shall be handled carefully so as not to damage their edges. They should not also be thrown from any height to the ground but should be put down gently. All courses shall be laid truly horizontal and all vertical joints made truly vertical. Vertical joints in one course and the next below shall not come over one another and shall not normally be nearer than quarter of a brick length. For battered faces bedding shall be at right angles to the face. Fixtures, plugs, frames etc., if any, shall be built in at places shown in the plans while laying the courses only and not later by removal of brick already laid. Care shall be taken during construction to see that edges of bricks at quoins, walls, heads etc., are not damaged.

The verticality of the walls and horizontality of the courses shall be checked very often with plumb-bob and spirit level respectively.

d. **BOND:**

Unless otherwise specified, brick work shall be done in English bond.

e. **JOINTS:**

Joints shall not exceed 10mm (About 3/8") in thickness and this thickness shall be uniform throughout. The joints shall be raked out not less than 10mm (about 3/8") deep when the mortar is green where pointing is to be done. When the brick surfaces are to be plastered the joints shall be raked to a depth of 5mm when the mortar is green, so as to provide good key to plaster.

f. **UNIFORM RAISING :**

Brick work shall be carried up regularly in all cases where the nature of work will admit, not leaving any part 60 cm lower than another. But where building at different level is necessary, the breaks shall be stepped so as to give later a uniform level and effectual bond. Horizontal courses should be to line and level and even and face plumb or to batter as shown on the plan. The rate of laying masonry may be up to a height of 80 cm per day if cement mortar is used and 45 cm (about 18") if lime mortar is used.

2.4 **SCAFFOLDING :**

Scaffolding will be double or single as is warranted for the particular work. Put log holes shall be made good by bricks to match the face work when put logs are removed after ensuring that the holes behind are solidly filled in with 1:4:8 cement concrete.

2.5 **CURING :**

All brick work shall be kept well watered for 14 days after laying. **Where pozzolana cement is used for mortar, the curing shall be extended by one week at the Contractor's expense.**

2.6 **EXPOSED WORK :**

Where exposed brick work is prescribed, the usual specifications for the "Brick Work" as mentioned above will be applicable for "Exposed Brick Work" but in addition specially selected bricks shall be used for facing, ensuring regular and clean faces of uniform colour. No bricks which are broken, chipped, wrinkled or which have irregular edges or corners shall be used. Depending on the quality of bricks and if instructed by the Corporation's Engineers, the exposed face of every brick shall be rubbed before laying without extra charge. Wooden fillets 10 mm thick and 10mm wide shall be placed at the edge of joints so that no mortar comes on the surface of the bricks and a regular thickness of joints is maintained. The surface shall be rubbed down with brushes of bricks if necessary, and thoroughly washed. No mortar shall be allowed to stick to the surface, which shall be left clean to the Corporation's Engineer's satisfaction with all joints even and true to a straight line. Double scaffolding shall be used in exposed brick work.

**2.7 REINFORCEMENT IN HALF BRICK THICK WALLS :**

Half brick thick and brick on edge walls shall be provided with reinforcement consisting of 2 nos, 6mm dia M.S. round bars of 500mm long (each) as dowels, embedded in mortar 15mm thick at every fourth course and securely anchored at their ends where the partitions bonds with the cross walls. The cost of reinforcement in half brick thick and brick on edge walls shall be paid separately unless otherwise stated in the schedule of quantities.

**2.8 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rate for items of brick work shall include for the following:

- a. All labour, materials, use of tools, equipment and other items incidental to the satisfactory completion of brick masonry at all heights and levels.
- b. Erecting and removing of all scaffolding, ladders and plant required for the execution of the work to the height and depths and shapes as shown on the plan or ordered by the Engineer.
- c. Constructing brick work to lines, levels, batters, pillars, curves and to any position or shape, to any heights or levels including raking of joints and housing frames, fixtures etc.
- d. Curing the brick work.
- e. Removing of all stains and adhering mortar lumps on the brick work surfaces.

**2.9 MEASUREMENTS :**

- a. Half brick thick and brick on edge walls shall be measured in Sqm. unless otherwise mentioned.
- b. One brick thick wall and thicker walls shall be measured in Cum. Brick walls up to and including 3 bricks in thickness should be measured if multiples of half bricks which shall deemed to be inclusive of mortar joints. Widths of more than three bricks in walls will be measured actually and limited to the width specified.
- c. No deductions or additions shall be made on any account for :-
  - i. Ends of dissimilar materials (i.e.,) joints, beams, lintels, posts, girders, rafters, purlins, trusses, corbels, steps etc.) up to 500 cm<sup>2</sup> in section and
  - ii. Openings up to 0.1 m<sup>2</sup> in section.

**NOTE :**

- i. In calculating the area of openings, any separate lintels or sills be included along with the size of the openings but the end portions of the lintels shall be excluded and the extra width of debated reveals, if any, shall be excluded.
- ii. Wall plates and bed plates, and beating of slabs, CHAJJAS and the like which the thickness does not exceed 10 cm and the bearing does not extend over the full thickness of the wall.

**3. STEEL DOORS, WINDOWS AND VENTILATORS****3.1 I.S. SPECIFICATION :**

Unless otherwise stated, the Indian Standard Specification applicable for steel doors, windows and ventilators shall be IS-1038-1957 - "Specification for Steel Doors, Windows and Ventilators"

**3.2 OPENING :**

All the window and ventilator shutters should open outside unless otherwise specified.

**3.3 FLASH WELDING :**

Both the fixed and opening frames of the doors, windows and ventilators shall be formed by cutting sections to required lengths, and mitred. The corners shall be electrically flash welded. Sash-bars of the units shall be tenoned and reveted into the frames. Slots shall be cut in the fixed frames and hinges shall be inserted inside and welded to frames.

**3.4 HANDLES, PEGSTAYS :**

Each side hung shutter shall be provided with suitable protruding hinges and peg stay arms 300 mm (12") long and shall have holes to keep the shutter open in three different positions up to 90 degree (The peg and the arm for the peg stay shall be riveted). The handle shall be mounted on a handle plate and the plate shall be welded to the opening frame. The handle shall have a two point nose which will engage with suitable tapered striking plate provided on the fixed frames to keep the shutter open in a slightly open position as well as in a last position.

**3.5 TOP/BOTTOM HUNG VENTILATORS :**

Top hung and bottom hung ventilators shall be provided with two plain hinges, with 300 mm (12") peg stay arms, which will keep the shutter open in three different positions and will act as a stopper too.

**3.6 CENTRE HUNG VENTILATORS :**

Centre hung ventilators shall be made with two outer frames with mastic waterproof compound embedded between these two other frames. They shall also be provided with a spring catch which when pulled by a cord, the upper half shall open inside and the lower half shall open out.

**3.7 BEADING :**

Where wooden or metal beading is specified in the Drawing or elsewhere for the glazing, the Contractor should provide windows with threaded holes for fixing the beading with screws.

**3.8 SAMPLE OF WINDOW :**

A typical approved sample window for each building should be kept in the office of the Executive Engineer of the Corporation until the satisfactory completion of the building. All windows and ventilators supplied and fixed at site should be of the same quality as of the

approved sample ; otherwise they shall be rejected. The decision of the Chief Engineer or his Authorized Representative whether a window or ventilator compares well with the approved sample shall be final and binding on the Contractor.

**3.9 CHIEF ENGINEER'S APPROVAL :**

All windows and ventilators are subject to the approval of the Chief Engineer or his authorized representatives and they shall be strictly in accordance with the specifications without any bends, dents etc.

**3.10 AS PER DRAWINGS :**

All windows and ventilators shall be manufactured as per drawings supplied to the Contractor.

**3.11 FIXING TO BRICK WORK/CONCRETE :**

Steel windows and ventilators shall be fixed to brick work by means of standard M.S. lugs of size 100x16x3 mm and to concrete work by means of 125mm long counter sunk screws with rawl plugs after drilling into concrete with a power drill. Steel windows/ventilators etc., shall be fixed as per manufacturer's recommendations or I.S. specifications. Holdfasts shall be grouted in concrete of 1:2:4 mix of dimensions as directed. Quoted rates to cover for all these factors.

**3.12 IMPORT LICENSE :**

No import license shall be made available for obtaining any material not available in India.

**3.13 STRUCTURAL SUFFICIENCY OF WINDOWS :**

All windows, doors and ventilators shall be manufactured from standard extruded sections of approved, appropriate size suitable for the particular type and size of the window etc. Detailed shop drawings indicating the full design of every type of window and ventilators shall be furnished for approval before undertaking the work. Contractor shall assume full responsibility regarding soundness of the window, doors and ventilators and adequacy of the sections used for the particular sizes required to provide appropriate stiffness and strength. If, in the opinion of the Chief Engineer deficiencies in the sections used are found the Contractor shall replace the windows, ventilators, etc. at his expense by windows and ventilators etc., made from approved sections.

**3.14 ALL TYPES OF WINDOWS :**

Rates quoted for steel windows and ventilators shall cover for all types of windows and ventilators whether of standard sizes or purpose made. Where composite or continuous windows over long lengths (In plan) are required, rates shall cover for mullions, transoms at vertical or horizontal junctions of approved design. Rates should also cover for partly openable type of continuous windows, shutters of any type like side hung, centre hung, top hung etc., as per drawings.

**3.15 PAINTING :**

All steel windows, doors and ventilators etc. to have two coats of ready mixed oil paint of approved shade, colour and manufacture (M/s Jenson & Nicholson or other equivalent and approved) over a coat of red oxide primer. Contractors rates to be inclusive of such painting. If a proper and even surface is not obtained to the satisfaction of Chief Engineer in the number of coats specified, Contractor shall carry out additional coats of painting to approval at his expense.

**3.16 RATES TO COVER :**

Unless otherwise stated Contractor's rates for steel windows, ventilators shall, apart from any other factors mentioned elsewhere in this contract, include for providing and fixing the following.

- a. Windows/Ventilator frames and shutters with hinges as described,
- b. M.S. holdfasts or lugs as specified projecting 100mmx16mmx3mm in the positions and as per design in I.S. Specification or where fixed to concrete 125 mm long counter sunk screws with rawl plugs,
- c. Rolled Steel Mullions
- d. Transoms with projecting weather bars for side hung shutters and plain ones for fixed windows
- e. Aluminium beading with brass screws
- f. Bolts, nuts, screws
- g. Handles and peg stays
- h. Manganese brass spring catches
- i. Chords for centre hung windows
- j. Painting as described in these specifications
- k. Grouting of holdfasts in 1:2:4 concrete.

**3.17 MEASUREMENT :**

Measurement shall be in Sqm.

#### **4. WOOD WORK AND JOINERY**

##### **4.1 TIMBER**

- i. Unless otherwise specified all timber for frames and shutters for doors, windows, ventilators, cupboards etc., shall be first class, sound, well seasoned, C.P. Balarshah or other equivalent and approved teak and shall be free from knots, shakes, fissures, flaws, sun cracks and other defects. The planned surface shall be smoothened free from blemishes and discolorations. Timber shall be wrought, framed and cut to shape as shown on drawings and/or as directed.
- ii. All timber for carpentry and joinery in touch with masonry or concrete shall be coal tarred or creosoted before fixing. All rough frame work in partitions, suspended ceilings and veneering to walls etc., shall be treated with approved wood preservative 'Bison' or other equivalent and approved as per manufacturer's instructions and specifications. The rates quoted shall provide for such treatments.
- iii. All fully fabricated timber shall be air seasoned on site of work for a period of not less than two months to allow for any shrinkage that may take place. The preparations of timber for joinery is to commence simultaneously with the beginning of the project work generally and should proceed continuously until all the wood work is prepared and fixed/stacked on or near the site as the case may be. Generally wood shall be free from knots, however, wood with knots may be permitted provided individual hard and sound knot shall not be more than 40 mm in diameter and aggregate area of all the knots shall not exceed one half percent of the area of the piece

Teak wood shall be approved incorporating in the work Contractor should ensure wood work does not warp or show other defects due to lack of proper seasoning.

##### **4.2.1 HOLD FASTS :**

Three hold-facts shall be fixed to each post of the door from and two to each post of the window frame. Unless otherwise mentioned in the item, the M.S. Hold-fasts shall be of the Size 300mm x 35 mm and 6 mm and shall be fixed to the frames by means of screws and not nails. The other. End of the hold fast shall be fixed into jambs within 1:2:4 P.C.C if dimensions as directed.

Whenever asked for, rawl plugs or bolts as directed shall be used for rough grounds framing hangers etc. The rates quoted for wood work and joinery shall allow for all types of hold fasts as directed (Horns in frames shall be cut and shall not be used as hold facts)

##### **4.3 WORKMANSHIP AND CONSTRUCTION :**

- i. The workmanship shall be first class and to the approval of the E.E. Scantling and boarding shall be accurately sawn and shall be of required width and thickness. All carpenter's work shall be wrought except where otherwise described. The workmanship and joinery shall be accurately set out in strict accordance with the drawings and shall be framed together and securely fixed in approved manner and with properly made joints. All work is to be properly tenoned, shouldered, wedged, pinned, braded etc. and properly glued with approved quality glue to the satisfaction of the E.E.

##### **ii. SCREWS :**

All screws to be used in wood work and joinery shall be of brass and not iron.

##### **lii TOLERANCES :**

15mm (1/16") will be allowed for each wrought face of the sizes specified except where described as 'finished' in which case they shall hold to the full dimensions. For door/window frames tolerance shall be +/- 2/3 mm. in cross sectional dimensions and for shutters +/- mm in thickness +/- 2/3 mm in width of styles and rails. For flush door shutters tolerance in width/height shall be +/- 3 mm and on thickness +/- 1.2 mm

iv. **PROTECTION :**

Il wood work and joinery edges of timber frames etc., shall be protected from being damaged during construction by the Contractor.

v. If it is decided by the Employer to provide antitermite treatment, the Building Contractor shall coordinate his work suitably as directed by the Executive Engineer.

vi. Door/Window frames shall have cut rebates. Planted rebates shall not be permitted.

**4.4 WOODEN FLUSH SHUTTERS (SOLID CORE TYPE)**

a. Solid core flush shutters shall be of commercial or Teak veneered type as specified in the item manufactured by M/s Sita Board Mysore Commercial Union Ltd., or other equivalent and approved quality. An approved sample shall be deposited in the office of the Corporation's Engineer on site for reference. The shutters will be provided with lipping. Finished thickness of the shutter shall be as mentioned in the item.

a. **PARTITION BOARD :**

Shall be of waterproof quality 'NOVA TEAK SUPER' (Phenol bonded, 3 layers flat pressed), manufactured by M/s Plywood Manufacturing Ltd., Bombay or other equal and approved.

**4.5 TEAK WOOD PANELLED SHUTTERS :**

Solid wood panels for shutter shall be of pattern and size specified. Wherever possible each panel shall be in a single width piece. But where two pieces are used, width of each piece should not be less than 12.5 cm. In order to avoid warping, splitting and cracking, normally pieces not exceeding 20 cm. in width should be used. When made from more than one pieces. The pieces shall be jointed with a continuous tongued and grooved joint and glued together and reinforced the longer dimension of the panel. Planes shall be framed in to grooves to the full depth of the groove leaving an air space of 1.6 mm and the faces shall be closely fitted to the sides of the groove. Mouldings to the edges of panel openings shall be scribed at the joints.

**4.6 FIXTURES AND FASTENINGS :**

Unless otherwise specified in the Schedule of Quantities each shutter shall be hung with three iron butt/parliamentary hinges of approved quality size and make with iron screws the things and screws bolt should be copper Oxide coated and the Contractors rate shall cover for providing and fixing hinges to the shutters. Unless otherwise specified in the Schedule of Quantities other fittings, if ordered, shall be paid separately as prime cost items. Hardware for doors and windows shall be of M/s Bivon, M/s Manmatha Hari & Sons, M/s De's Lock Industries, M/s Godrej, M/s Garnishor other equivalent and approved make.

**4.7 FINISHING :**

The wood work shall be finished by 3coat of painting. French polishing or wax polishing as specified in the item.

**4.8 RATE TO INCLUDE :**

Apart from other factors mentioned elsewhere in this Contract, the rate for item of wood work and joinery shall include for the following :-

- i. All labour, materials and equipments for carrying out the work.
- ii. Providing and fixing frames and shutters, fastening and fixtures including embedding in the floor about 40/50 mm deep and labour for fixing hardware fittings, supplied by L.I.C.I. or purchased under prime cost items.
- iii. Bison or other equivalent wood preservative treatment to rough frame work in partitions, suspended frame work in ceilings and timber veneering to walls etc.
- iv. Coal tarring / creosoting of embedded parts of woodwork in masonry and concrete.
- v. Unless otherwise specified, sheet glass (plain or frosted) for shutters of doors/windows/fanlight, as manufactured by M/s Hindustan Pilkington or other equal and approved.
- vi. T.W. beadings/T.W. planted beads for fixing panels of shutters of doors, wherever required to be provided.
- vii. Providing T.W. cover mould of approved size.
- viii. 3 coats of 1st quality synthetic Enamel paint of approved colour and shade including primer as manufactured by M/s The Alkalis & Chemical Corporation of India Ltd. (With I.S.I. trade mark), M/s Goodlace Nerolac, M/s Jenson & Nicholson or equal and approved, 3 coats of French or wax polishing to approval as specified in the item.

#### **4.9 MODE OF MEASUREMENT :**

Timber Doors/Windows shall be measured in Sqm. over door, window frames if the item specified is composite one otherwise only shutter shall be measured in Sqm. Length shall be measured nearest to centimeter.

### **5. WHITE GLAZED TILES IN FLOORING AND DADO**

#### **5.01 TILES**

White glazed tiles including specials shall be of approved make and quality and shall conform to IS-777-1961 in all respects. Samples of tiles shall be got approved by the Chief Engineer, who will keep them in his office for verification as to whether the materials brought for use conform to the approved samples. White glazed tiles shall be of the size 152x152x 5 mm.

#### **5.02 MORTAR BEDDING :**

Unless otherwise specified the tiles in Flooring shall be laid In the cement mortar 1:6 bedding . The amount of water added shall be minimum necessary to give just sufficient plasticity for laying and satisfactory bedding. Care shall be taken in preparing the mortar to ensure that there are no hard lumps that would interfere with the even bedding of the tiles. Before spreading mortar, sub-floor or base shall be cleaned of all dirt, scum, loose materials and laitance if any, by scrubbing with coir or steel wire brush or by hacking if necessary and then well wetted without forming any pools of water on the surface. Before laying, the mortar , the sub-grade shall be got approved by the Executive Engineer in case of R.C.C. floors, the top shall be left a little rough. All points of level for the finished paving surface shall be

marked out. The mortar shall then be evenly and smoothly spread over the base by the use of screed battens only over so much area as will be covered with tiles before the setting of the mortar. The thickness of the mortar bed shall not be less than 20 mm.

#### **5.03 LAYING, FINISHING, CURING AND CLEANING :**

The tiles before laying shall be soaked in water for at least 2 hours. Tiles which are fixed in the floor adjoining the wall shall be so arranged that the surface of the round edge tiles shall correspond to the skirting or dado. Neat cement grout of honey like consistency shall be spread over the bedding mortar just to cover so much area as can be tiles within half an hour. The edges of the tiles shall be smeared with neat white cement slurry and fixed in this grout one after the other, each tile being well pressed and gently tapped with a wooden mallet till it is properly bedded and in level with the adjoining tiles. There shall be no hollows in bed of joints. The joints shall be kept as close as possible and in straight lines. The joints between the tiles shall not exceed 1.5mm wide. After fixing the tiles finally in an even plane, the flooring shall be covered with wet saw dust. The tile flooring shall be cured for 14 days.

After the tiles have been laid in a room or the day's fixing work is completed the surplus cement grout that may have come out of the joints shall be cleaned off before it sets. Once the floor has set, the floor shall be covered with oil free dry saw dust which shall be removed only after completion of the construction work and just before the floor is occupied.

#### **5.04 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the Contractor's rate quoted include for the following.

- i. Cleaning the base and providing and laying bedding mortar and leveling.
- ii. Providing and fixing the tiles including all specials like round edges corner cups, angles etc. in neat cement float over the bedding mortar.
- iii. Filling the joints of tiles with neat white cement slurry.
- iv. Finishing, curing and cleaning.
- v. All labour, materials and use of tools for carrying out the items as specified above.

**5.05 MODE OF MEASUREMENT :**

Measurement for flooring tiles shall be in square meters as provided.

**5.06 WHITE GLAZED TILES DADO :****a. TILES**

White glazed tiles shall be same as described under white glazed tiles flooring.

**b. MORTAR BACKING :**

All joints in the face work shall be raked out to a depth equal to not less than the width of the joints or as directed by the Executive Engineer. Concrete surfaces shall be properly hacked. All dirt, soot oil, or any other material that might interfere with satisfactory bond shall be removed. The surface shall be cleared and scrubbed with fresh water and kept wet for 6 hours prior to applying backing mortar. The dado work shall not be commenced unless the preparatory work is passed by the Executive Engineer. The proportion of mortar bedding shall be 1:3 cement mortar. Sand in mortar bedding shall be from approved source, and shall conform to I.S.1542-1960 as applicable to internal wall and ceiling plastering and external wall plastering. The thickness of mortar backing shall not be less than 12mm and not more than 20mm.

**c. FIXING DADO TILES :**

Dado work shall be done after fixing tiles on the floor. The white glazed tiles shall be soaked in water for atleast 2 hours before being used for dado work. Tiles shall be fixed when the cushioning mortar is still plastic and before it gets very stiff.

The back of tiles shall be covered with a thin layer of neat cement paste and the tile shall then be pressed in the mortar and gently tapped against the wall with a wooden mallet. The fixing shall be done from bottom of wall upwards without any hollows in the bed or joints. Each tile shall be fixed as close as possible to the one adjoining. The tiles shall be jointed with white cement slurry. Any difference in the thickness of tiles shall be evened out in cushioning mortar so that all tiles faces are in one vertical place. The joints between the tiles shall not exceed 1.5mm in width and they shall be uniform. The tiles shall be fixed with straight joints. After fixing the dado, they shall be kept continuously wet for 14 days. If doors, windows or other openings are located within the dado area, the sills, jambs angles etc., shall be provided with white glazed tiles and appropriate specials according to the foregoing specification and such tiled area be measured net along with the dado.

**d. CLEANING :**

After the tiles have been fixed the surplus cement grout that may have come out of the joints shall be cleaned off before it sets. After the complete curing, the dado or skirting work shall be washed thoroughly clean.

**5.07 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rates for the item or dado or skirting shall include the following:-

- i. Backing mortar.
- ii. Providing and fixing tiles including all specials like round edges, angles, capping etc. in neat cement float over backing mortar.
- iii. Jointing of the tiles with white cement slurry.
- iv. Curing.
- v. Cleaning.
- vi. All labour, material, use of tools and equipments for carrying out the items as specified above.

#### **5.08 MODE OF MEASUREMENT :**

Dado shall be measured in square meters as provided.

### **6. POLISHED KOTAH/SHAHABAD/TANDUR STONE FLOORING, DADO/LINING AND SKIRTING FLOORING**

#### **6.1 STONE SLABS :**

The stone slabs shall be hard, sound, durable, resistant to wear. Unless otherwise specified, stone slabs shall be square in shape 30 x 30 cm size and 25mm thick. The stone slabs shall be without any soft veins, cracks or flaws and shall have a uniform colour. A tolerance of 3mm in thickness at any point shall be permitted. The exposed surface of stone slabs, shall be machine polished to a smooth even and true plan and the edges to be chiselled to half its depth, true and square to ensure uniform width of joint. The edges of stone slabs shall be machine cut square to the required shape, if necessary. The stone slabs shall be of approved colour and shades. A few approved samples of stone slabs to be used shall be deposited by the Contractor in the office of the Corporation's Engineer.

#### **6.2 MORTAR BEDDING :**

Lime mortar shall be prepared in mortar mill or pan. The amount of water added shall be the minimum necessary to give just sufficient plasticity for laying and satisfactory bedding. Care shall be taken in preparing the mortar to ensure that there are no hard lumps that would interfere with the even bedding of the stone slabs. Before spreading the mortar the sub-floor or base shall be cleaned of all dirt, scum, loose materials and laitance if any by scrubbing with coir or steel wire brush or by hacking if necessary, and then well wetted without forming any pools of water on the surface. Before laying the mortar, the sub-grade shall be got approved by the Executive Engineer. In case of R.C.C. floors, the top shall be left a little rough. All points of level for the finished paying surface shall be marked out. The mortar shall then be evenly and smoothly spread over the base by the use of screed battens, only over so much area as will be covered with slabs within half hour. The thickness of the mortar bedding shall not be less than 15mm and not more than 25mm. The required slope shall be given to the bed. Unless otherwise specified, the proportion of mortar bedding shall be 20 mm thick average cement mortar 1:6 and where lime bedding is specified in the scheduled of the quantities proportion of Lime mortar shall be 1:3 1 lime : 3 sand).

#### **6.3 LAYING, CURING, POLISHING, FINISHING AND CLEANING :**

Before laying the stone slabs shall be thoroughly wetted with clean water. Neat cement grout of honey like consistency shall be spread on the mortar bed over as much area as could be

covered with the slabs within half an hour. The stone slabs shall be laid on the neat cement float and shall be evenly and firmly bedded to the required level and slope in the mortar bed. The stone slabs shall be laid in the approved pattern in single or two tone colour.

Each stone slab shall be gently tapped with a wooden mallet till it is firmly and properly bedded. There shall be no hollows left. If there is a hollow sound on gently tapping of the stone slab, such stone slabs shall be removed and reset properly. The mason shall make the joint of uniform thickness and straight lines. The thickness of joints shall not exceed 1.5mm. The joints shall be grouted with neat cement slurry. No border stone slabs shall be less than 100mm in width, unless otherwise approved by the Executive Engineer.

When the bedding and joints of the flooring have been completely set, the surface shall be machine polished to give a smooth, even and true plane to the floor and thoroughly cleaned.

#### **6.4 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the Contractors rate quoted shall include for the following :

- i. Cleaning the base of providing and laying bedding mortar and leveling.
- ii. Providing and fixing the stone slabs in neat cement float on the bedding mortar.
- iii. Filling joint of stone slabs with neat cement slurry of required colour to match the colour of the stone slabs.
- iv. Chiselling, polishing, finishing and cleaning.
- v. All labour, materials and use of tools for carrying out the item as specified above.

#### **6.5 MODE OF MEASUREMENT :**

Measurement for flooring, stone slabs shall be in square metre as provided.

#### **6.6 DADO / LINING AND SKIRTING**

The stone slabs shall be as specified above for flooring unless otherwise mentioned. The stone slabs shall be in approved lengths to match the flooring. The exposed edges of stone slabs such as in dado/lining and skirting, jams, soffits, sills etc, shall be machine cut and polished smooth.

##### **a. MORTAR BACKING :**

All joints in the face work shall be raked out to a depth equal to not less than the width of the joints or as directed by the Executive Engineer. Concrete surfaces shall be properly backed. All dirt, oil or any other materials that might interfere with satisfactory bond shall be removed. The surface shall be cleaned and scrubbed with fresh water and kept wet for 6 hours prior to applying backing mortar. The dado/lining or skirting work shall not be commenced unless the preparatory work is passed by the Executive Engineer. The proportion of mortar for backing shall be 1:3 cement mortar. Sand in mortar bedding shall be from approved sources and shall conform to I.S. 1542-1960 as applicable to internal wall and ceiling plastering and external wall plastering. The thickness of mortar backing shall not be less than 12mm and not more than 20mm.

**b. FIXING DADO/LINING OR SKIRTING STONE SLABS :**

Dado/lining or skirting shall be done only after fixing stone slabs on the floor. The stone slabs shall be thoroughly wetted in water before being used for Dado/lining or skirting work. The stone slabs shall be fixed when the backing mortar is still plastic and before it gets stiff. All the stone slabs shall be covered with an additional layer of neat cement paste and stones shall then be pressed in mortar and gently tapped against the wall with wooden mallet. The fixing shall be done from the bottom of wall upwards without any hollows in the beds or joints. Each stone slab shall be fixed as close as possible to the adjoining stone slab. The stone slab shall be jointed in neat cement slurry to match the colour of the stones. The joints shall not exceed 1.5mm in width and they shall be uniform. While fixing the stone slabs in dado/lining or skirting work, care shall be taken to see that the joints in the adjoining flooring below, matches with the joints in the dado/lining or in skirting, as the case may be, or shall be staggered as directed. When specified brass cramps and pins etc. of approved size shall also be used for fixing dado/lining.

**c. POLISHING :**

When stone slabs are completely set, polishing shall be done by hand with approved type of polishing stone. A smooth and even polished surface shall be obtained to match the finished surface of the flooring.

**d. CURING :**

The dado/lining or skirting shall be kept wet for 14 days.

**6.7 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract the rate for the item of dado/lining or skirting shall include the following :-

- i. Backing mortar.
- ii. Providing and fixing stone slab with exposed edges machine cut including all special tiles and finishing the edges with plaster.
- iii. Providing and fixing brass cramps and pins etc., for dado/lining where specified.
- iv. Joints of the stone slabs filled with coloured cement slurry to match the stone slabs.
- v. Curing.
- v. Chiselling, polishing, use of tools and equipments for carrying out the items as specified above.

**6.8 MODE OF MEASUREMENT :**

- a. Dado/lining shall be measured in Square Meters as provided.
- b. The height of skirting shall be specified in the item and shall be measured in R.M.  
(Skirting up to 30 cm. in height shall be measured in running meters)

**7. CAST IN SITU MARBLE MOSAIC FLOORING, DADO AND SKIRTING.****7.1 CAST IN SITU MARBLE MOSAIC FLOORING :**

i. **PREPARATION OF SUB-GRADE :**

The sub-grade shall be prepared as for the cement concrete flooring.

ii. **FLOORING COMPOSITION :**

This will compose of two layers, the bottom one called the 'Under coat' and the top one called the 'Top coat'. The bottom coat shall be 30mm thick and the top coat shall be 10mm thick. The total thickness shall be 40mm unless otherwise stated.

a. **UNDER COAT :**

The under coat will have the same proportion and consistency as for cement flooring and shall be mixed and placed in the same manner, except that no finishing shall be done to make the surface smooth ; the top surface of concrete in the under coat shall be kept sufficiently rough to form a key to the top coat.

b. **ALUMINIUM STRIPS :**

While laying the under coat, aluminium strips of 10 gauge and 40mm wide as separators shall be provided to form approved panels. The area of each panel in the flooring shall not exceed 1.5 Sq. Meters the longest side of any panel not exceeding 2 meters. The cost of providing aluminium strips in the flooring shall be included in the rate quoted for mosaic flooring.

c. **TOP COAT :**

The grading, proportion and colour of the marble chips shall be got approved from the Executive Engineer after preparing a few samples of cast in situ mosaic flooring. The proportion of white cement, grey cement, coloured cement, pigments and marble chips in the top coat shall be got approved from the Executive Engineer to get light shades, medium shades and dark shades as required. The proportion of cement to marble chips shall be 1:2. The top coat shall be laid as per I.S.:2114-1962.

iii. **POLISHING AND FINISHING :**

After the top coat has hardened enough to prevent dislodgement of aggregate particles, the surface shall be machine polished and finally washed with 'TATRI' and then wax polished to give a smooth and shining surface.

iv. **CURING :**

The flooring shall be kept covered and damp till it is properly set and given final finish.

v. **RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rates shall include for the following:

- a. Providing and laying 1:2:4 cement concrete for under coat in panels.
- b. Providing and fixing aluminium strips to form panels.
- c. Mixing the ingredients of terrazzo mix in white cement grey cement coloured cement/approved pigments and marble chips of approved quality, maximum size and graded down as required and laying it in the top coat.
- d. Curing
- e. Machine polishing and finishing as specified above.

vi. **MODE OF MEASUREMENT :**

The measurement shall be in Square Metre of cast in situ mosaic flooring provided.

**7.2 DADO AND SKIRTING :**

- a. Dado and skirting shall be laid in two layers, the under coat being laid as plaster and the top coat with marble chips in white/grey/coloured cement as required.

b. **UNDER COAT :**

The under coat shall be in 1:3 cement mortar and shall be applied to the wall surface as per plaster. The thickness of the plaster shall be 12mm for brick and concrete faces, and 20mm for stone faces. The surfaces of the under coat shall be kept rough to form a key for the top coat of the marble chips in white/grey/coloured cement as required in different proportions.

c. **ALUMINIUM STRIPS :**

Aluminium strips shall be provided minimum 10 gauge and width to suit the thickness of the dado (Inclusive of top coat). The aluminium strips shall be fixed in plaster when it is green. Spacing of aluminium strip shall not exceed 2 metres.

d. **TOP COAT :**

This shall be similar to the top coat in cast-in-situ mosaic flooring.

e. **POLISHING :**

The finished surface shall be rubbed with Carborandum stone and finally washed with "Tatri" and then wax polished to get smooth and shining surface. The surface shall be kept damp till it is properly set.

**7.3 RATES TO INCLUDE :**

Apart from other mentioned elsewhere in this contract, the rates shall include for the following :-

- i. Applying under coat in 1:3 cement mortar and roughening the surface.
- ii. Providing and fixing aluminium strips.
- iii. Mixing the ingredients of terrazzo mix as required and laying it in top coat.
- v. Curing.
- v. Polishing and finishing the dado/skirting.

**7.4 MODE OF MEASUREMENT :**

- i. Dado shall be measured in Square Metre.
- ii. Skirting less than 30 cm. height shall be measured in running metre.

**7. PLAIN OR COLOURED CEMENT TILES OR TERRAZZO TILES FLOORING DADO AND SKIRTING**

**8.1 FLOORING :**

**8.2 TILES :**

Plain or coloured cement tiles and terrazzo tiles shall be manufactured as per I.S.: 1237-1980 using grey or white cement and pigments and marble chips of sizes as required. Tiles shall be of the size 250x250x22 mm (10"x10"x7/8") or any other approved size. Tiles shall be of tiles to be used shall be deposited by the Contractor in the office of the Corporation's Engineer.

**8.3 CONCRETE BASE AND MORTAR BEDDING :**

The base of cement or lime concrete shall be laid and compacted to a reasonably true plain surface and to the required slopes and below the levels of the finished floor to the extent of the thickness of the tiles and mortar bedding. Cement concrete or lime concrete base shall be paid under a separate item. Lime surkhi-mortar for bedding shall be prepared in a mortar mill. The amount of water added shall be minimum necessary to give just sufficient plasticity for laying and satisfactory bedding. Care shall be taken in preparing the mortar to ensure that there are no hard lumps that would interfere with the even bedding of the tiles. Before spreading mortar, sub-floor or base shall be cleaned of all dirt, scum, laitance and all loose materials and then well wetted without forming any pools of water on the surface. In case of R.C.C. floors, the top shall be left a little rough. All points of level for the finished paving surface shall be marked out. The mortar shall then be evenly and smoothly spread over the base by the use of screed battens only over so much area as will be covered with tiles before the setting of the mortar. The thickness of the mortar bedding shall be 1:1:1 (1 lime putty: 1 surkhi: 1 sand). Sand for mortar bedding shall be as per I.S.S. No. 2116-1965 as applicable to unreinforced masonry work. Skirting, dado and raisers of steps/staircase shall be fixed on backing of cement mortar 1:3, 12mm thick with thick cement paste.

**8.4 LAYING CURING, POLISHING, FINISHING AND CLEANING :**

Before laying, the tiles shall be thoroughly wetted with clean water. Tiles shall be laid as per approved pattern on the mortar bed and floated in neat cement slurry. The joints of the tiles shall not be more than 1.5 mm wide and shall be filled with neat cement slurry of required colour to match the colour of the tiles if required, the border tiles shall be cut to proper sizes and the rate quoted shall cover for the same. No border tile shall be less than 100 mm in width, unless otherwise approved by the Executive Engineer.

Flooring shall be kept wet for 14 days.

Polishing and cleaning of the whole floor shall be done according to I. S. 1443-1959

**8.5 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the contractor's rate quoted shall include for the following:-

- i. Cleaning the base and providing and laying bedding mortar and leveling.
- ii. Providing and fixing the tiles in neat cement float on the bedding mortar.
- iii. Filling the joints of tiles with neat cement slurry of required colour to match the colour of the tiles.
- iv. Polishing finishing and cleaning. All labour, materials and use of tools for carrying out the item as specified above.

#### **8.6 MODE OF MEASUREMENT :**

Measurement for flooring tiles shall be in Square Metre as provided.

#### **8.7 NOTE :**

- a. Tiles with white cement shall be considered as light shade tiles.
- b. Tiles approximately 50% white cement and 50% ordinary cement shall be considered as medium shade tiles.
- c. Tiles with ordinary cement shall be considered as dark shade tiles.
- d. Marble chips for terrazzo/marble mosaic tiles shall be varying from the smallest up to 20mm size.

#### **8.8 DADO AND SKIRTING :**

- a. Tiles shall be as specified above for flooring, except that in the case of skirting the height of tiles may be less than the height of 1 full tile.

##### **b. MORTAR BACKING :**

The proportion of mortar for backing shall be 1:3 cement mortar. Sand in mortar bedding shall be as per I.S. No.1546-1960 as applicable for under coat of internal plastering.

##### **c. FIXING DADO OR SKIRTING TILES :**

Dado or skirting shall be done only after fixing tiles on the floor. The tiles shall be soaked in water before being used for dado or skirting work. The tiles shall be fixed when the backing mortar is still plastic and before it gets stiff. All the tiles shall be covered with an additional layer of neat cement paste and tiles shall then be pressed in mortar and gently tapped against the wall with wooden mallet. The fixing shall be done from the bottom of wall upwards without any hollows in the beds or joints. Each tiles shall be fixed as close as possible to the adjoining tile. The tile shall be jointed in neat cement slurry to match the colour of the tiles. The joints shall not exceed 1.5mm in width and they shall be uniform. While fixing the tiles in skirting or in dado work care should be taken to see that the joints in the adjoining flooring tile below matches with the joints in the skirting or the dado tiles, as the case maybe, or shall be staggered as directed.

##### **d. POLISHING :**

Polishing may be done by hand with approved type of polishing stone. A smooth and even polished surface shall be obtained to match the finished surface of the flooring.

- e. **CURING** : The dado or skirting shall be kept wet for 14 days.

**8.9 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract the rate for the item of dado or skirting shall include the following :-

- i. Backing mortar.
- ii. Providing and fixing the tiles including all special tiles and finishing the edges with plaster.
- iii. Joints of the tiles filled with coloured cement slurry to match the tiles.
- iv. Curing.
- v. Polishing and cleaning the dado and skirting.
- vi. All labour, material, use of tools and equipments for carrying out the items as specified above.

**8.10 MODE OF MEASUREMENT :**

- a. Dado shall be measured in Square metre.
- b. The height of skirting shall be specified in the item and shall be measured in R.M. (Skirting up to 30 cm. in height shall be measured in running meter.

**9. MARBLE FLOORING****9.1 MARBLE SLABS :**

The marble shall be of approved shade and sources as mentioned in the Schedule of Quantities and their size and the thickness shall be as shown on the drawings and as approved by the Executive Engineer. They shall be of selected quality, dense, uniform and homogeneous in texture and free from cracks or other structural defects. It shall have even and crystalline grains. The surface shall be machine polished to an even and perfectly plain surface and edges machine cut true and square. The rear face shall

be rough enough to provide a key for the mortar. No slab shall be thinner than the specified thickness at its thinnest part. The dimension of slabs shall be as specified. A few approved samples of finished slabs to be used shall be deposited by the Contractor in the office of the Corporation's Engineer. Unless otherwise mentioned, the thickness of the marble shall be minimum 20 mm.

**9.2 CONCRETE BASE AND MORTAR BEDDING :**

The base of cement or lime concrete shall be laid and compacted to a reasonably true plain surface and to the required slopes and allow the level of the finished floor to the extent of the thickness of the slabs and mortar bedding. Cement concrete or lime concrete base shall be paid under a separate item. Cement concrete for bedding may be mixed manually or by a mechanical mixer as directed. Lime mortar shall be prepared in a mortar mill. The amount of water added shall be the minimum necessary to give just sufficient plasticity for laying and satisfactory bedding. Care shall be taken in preparing the mortar to ensure that there are no hard lumps that would interfere with the even bedding of the stones. Before spreading the mortar, sub-floor or base shall be cleaned of all dirt, scum or laitance and of loose materials and then well wetted without forming any pools of water on the surface. In case of R.C.C.

floors, the top shall be left a little rough. All points of level for the finished paving surface shall be marked out. The mortar shall then be evenly and smoothly spread over the base by the use of screed battens only over so much area as will be covered with slabs within half an hour. The thickness of the mortar bedding shall not be less than 12mm (about 1/2") not more than 25mm (about 1").

**9.3 LAYING MARBLE SLABS :**

Before laying, the marble shall be thoroughly wetted with clean water. Neat cement grout of honey like consistency shall be spread on the mortar bed cover as much area as could be covered with the slab with 1/2 an hour. The specified type of marble slabs shall be laid to pattern as directed on the neat cement float and shall be evenly and firmly bedded to the required level and slope in the mortar bed. Each slab shall be gently tapped with a wooden mallet till it is firmly and properly bedded. There shall be no hollows left. If there is a hollow sound on gentle tapping on the slabs such slabs shall be removed and reset properly. The joints shall be hair fine width and in straight line grouted with neat coloured cement slurry to match the colour of the marble. The joints shall be struck smooth but there shall be no smearing over the mortar of the slabs. The edges of the adjoining slabs shall be in one plane.

- 9.4** The flooring shall be kept undisturbed at least seven days and wet for fourteen days. Marble flooring shall be given a final coat of wax polish of approved make. Polishing and cleaning of marble flooring shall be done according to I.S. No. 1443-1959.

**9.5 RATES TO INCLUDE:**

Apart from other factors mentioned elsewhere in this contract, the rate for item of marble flooring shall include for the following :-

- a. All labour, materials and equipments, cleaning the sub-base, laying mortar bed and cement grout and fixing marble slabs as specified above and making up the joints and wax polishing.
- b. Any cutting and waste if required.
- c. Curing.
- d. Cleaning the floor from all stains etc.

**9.6 MODE OF MEASUREMENT :**

The measurement shall be in Sq. metre for the actual marble flooring provided.

**10. CEMENT POINTING RECESSED/FLUSH RECESSED POINTING :**

**10.1 PREPARATION OF SURFACE :**

The joints in the masonry shall be raked out to a depth not less than the width of the joint as directed, when the mortar is green. The joints are to be brushed clean of dust and loose particles, with stiff brush. The Area shall then be washed and the joints thoroughly wetted before pointing is commenced. All dust and oily matters if any, shall be removed.

**10.2 PROPORTION OF MORTAR :**

The proportion of cement mortar shall be as described in item. The sand shall be from approved source free from foreign matter, washed clean if necessary and shall conform to I.S. 1542-1977. No more cement mortar shall be prepared than that can be used within half an hour. The mortar may be hand mixed or machine mixed. In hand mixed mortar, cement and sand in the specified proportion shall be thoroughly mixed dry on a clean impervious platform by turning over at least 3 times or more till a homogeneous mixture of uniform colour is obtained. Fresh and clean water shall be added gradually through a rose and thoroughly mixed so that mix becomes homogeneous and each particle of sand shall be

completely covered with a firm of wet cement. Mixing platform shall be so arranged that no deleterious extraneous material shall get mixed with mortar, not the mixing water of the mortar shall flow out.

### **10.3 APPLICATION :**

Waterproofing compound of approved make, shall be added according to manufacturer's specifications to make the mortar waterproof. The raked out joints shall be filled with mortar of the specified mix and the required consistency and well pressed and rubbed smooth. A semi-circular depression 3 mm dia shall be made in the joint by pressing clean string with trowel keeping the string exactly horizontal and on the centre line of the joint. The vertical joints shall be similarly marked. These depressed lines will then be immediately rubbed with a nayla till they become uniformly 5 mm deep and 6mm wide and assumed fairly blackish colour intersections of the horizontal and vertical shall be finished neatly with the vertical line just touching the horizontal line but not crossing it. All superfluous mortar shall be removed with the trowel. The brick surface shall be cleaned and no stain shall be allowed to remain.

When joints are not horizontal or vertical as in the case of uncoursed rubble masonry, the pointing shall be made along the centre line of joints to uniform width and depth as directed and junctions of pointing made nearly. The pointing mortar shall not spread over the adjoining stones. Mortar pointing shall be restricted to the width of the joints and all superfluous mortar shall be removed with a trowel.

### **10.4 CURING :**

All pointing work shall be kept damp, continuously for a period of 14 days.

### **10.5 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract rates for the item of pointing shall include for the following :-

- i. Erecting, dismantling and removing scaffolding.
- ii. Preparing the surface and watering.
- iii. Providing and filling in the joints with cement mortar, including approved waterproofing compound.
- iv. Curing and cleaning the surface.
- v. All labour, materials, use of tools and equipments to complete the work as per specification.

**10.6 MODE OF MEASUREMENT :**

Pointing shall be measured in square meters as in the case of plaster.

**10.7 FLUSH POINTING :**

This item shall be carried out, when joints are not struck, while the masonry is being laid. All the specifications of recessed pointing shall apply to this as well except that instead of making the lines with string and forming groove etc., the joints shall be kept flush with face of joints in the masonry.

**11. INTERNAL CEMENT PLASTER WITH / WITHOUT NEERU FINISH :****11.1 REPARATION OF SURFACE :**

The walls to be plastered to have all joints raked out to a depth of 10 mm if not already done. R.C.C. surface shall be properly backed to get good key to the plaster. All dust and oily matter, if any, shall be brushed and cleaned and the surface to be plastered shall be kept wet for 6 hours before plastering is commenced.

**11.2 PROPORTION OF MORTAR :**

Unless otherwise mentioned, the proportion of internal cement plasters for walls and ceiling shall be 1:4 (1 cement: 4 sand). Sand shall be from approved source, free from foreign matter and shall be as per I.S. 1548-1960 as applicable to internal wall and ceiling plastering. No more cement mortar shall be prepared than that can be used within half an hour.

**11.3 APPLICATION OF PLASTER :**

The mortar shall be applied evenly with force on the surface to be plastered. The mortar surface shall be finished at once by being rubbed over with a trowel till the cement appears on the surface. All corners, angles and junctions shall be truly vertical and horizontal as the case may be, carefully and neatly finished. Rounding of corners and junction where required shall be done without extra charge. The mortar shall adhere to the surface intimately when set and there should be no hollow sound when struck. The thickness of plaster shall be minimum 12mm over the proudest part of the surface of brick wall and R.C.C. surfaces and 20mm over stone walls. Plaster for ceiling shall not be more than 12mm.

**11.4 NEERU FINISH :**

If the plaster surface is to be given neeru finish, the surface shall be combed slightly with wire brushes or nails before it is completely set to form key for neeru. The under coat shall be only damped but not soaked before the application of neeru. The lime for preparing neeru shall be fat lime and shall be of approved quality and source. Lime shall be slaked and mixed with sufficient water to form a thick paste. It shall be reduced to a fine paste by grinding. It shall then be passed through a fine sieve (3 mm mesh) to remove all unslaked particles and foreign matter and allow to mellow under water for at least 10 days in large slaking tanks. The surplus water on the top shall be allowed to run off. The slaked lime paste thus formed shall be used for preparing neeru. The neeru shall be prepared by mixing together 4 parts of this lime paste and 1 part of approved fine sieved sand by volume. Jute fibres finely chopped shall be added to the above mortar at the rate of 4 Kg. of jute to every Cubic Metre of lime sand mixture. The mixture shall then be properly ground to a fine paste between two stones or a mill. The neeru thus prepared shall be kept moist until used and no more than what can be consumed in 15 days shall be prepared at time.

Neeru shall be applied to the prepared and partially set but somewhat plaster surface with steel trowel to a thickness slightly exceeding 1.5 mm (About 1/16") and rubbed down to 1.5 mm (1/16") thickness and polished to a perfectly smooth and even finish, working from top to bottom. While trowelling is going on soap stone powder contained in thin muslin bags shall be dusted over the surface and worked in.

Moisturing shall be commenced as soon as the plaster has hardened sufficiently and is not susceptible to injury. Soaking of wall shall be avoided and only as much water as can be readily absorbed shall be used. The surface shall be kept sprinkled with water for 14 days.

**11.5 NEAT CEMENT FINISH:**

When neat cement finish is specified over the plaster surface, a coat of pure Portland cement slurry 1.5mm thick shall be applied and well rubbed to the plaster surface while the plaster surface itself fresh.

**11.6 TROWEL FINISH :**

When no finish is specified, the plastered surface shall be rubbed well to an even plane with wooden flat for external surface and finished smooth with a steel trowel for internal surface.

**11.7 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere to this contract, rates for the item of plaster shall include for the following :-

- i. Erecting, dismantling and removing the scaffolding.
- ii. Providing the surface to receive the plaster.
- iii. Providing cement plaster of specified average thickness.
- iv. All labour, materials, use of tools and equipment to complete the plastering as per specification.
- v. Curing for 14 days.
- vi. Any moulding work if shown on the drawings or as specified unless separately provided in the tender.
- vi. Plaster work in hands, arises, rounded angles, fair edges, narrow returns, quirks, 'V' joints, splays, drip mouldings, making good to metal frames, junctions with skirting or dados, narrow widths and small quantities making good around pipes, conduits, timbers, sills, brackets, railings etc., and making good after all the sub-contractors or nominated sub-contractors have done their work.
- vii. Neeru or cement finish when specified in the item.

**11.8 MODE OF MEASUREMENT :**

Plaster shall be measured in square metres.

**a. WALLS :**

- i. The measurements of wall plastering shall be taken between the walls or partitions (the dimensions before plastering shall be taken) for the length, and from the top of floor/skirting/dado (As the case may be ) to the ceiling for the height.

**ii. DEDUCTIONS :**

- A. For jambs, soffits, sills, etc., for openings not exceeding 0.5 m<sup>2</sup> each in area and opening not exceeding 3 m<sup>2</sup> each , deductions and additions shall be made in the following manner :-
  - a. No deduction shall be made for ends of joists, beams, posts, etc., and openings not exceeding 0.5 m<sup>2</sup> each and no addition shall be made for reveals, jambs, soffits, sills etc., of these openings nor for finishing the plaster around ends of joists, beams, posts etc.
  - b. Deductions for openings exceeding 0.5 m<sup>2</sup> but not exceeding 3 m<sup>2</sup> each shall be made as follows and no addition shall be made for reveals, jambs, soffits, sills etc., of these openings :-

1. When both faces of wall are plastered with the same plaster, deduction shall be made for one face only.
  2. When two faces of wall are plastered with different plasters or if one face is plastered and the other pointed, deduction shall be made from the plaster or pointing out the side of frames for doors, windows, etc., on which the width of reveals, is less than that on the other side, but no deduction shall be made on the other side.
- B. In case of openings of area above 3 m<sup>2</sup> each, deductions shall be made for the openings but jambs, soffits and sills shall be measured.

**b. CEILINGS :**

- i. Ceilings shall be measured between the walls or partitions and the dimensions before plastering shall be taken.
- ii. Ceilings with projected beams shall be measured over beams and the plastered sides of beams shall be measured and added to plastering on ceilings.

**12. EXTERNAL CEMENT PLASTER WITH SAND FACED/COMBED /ROUGHCAST FINISH**

**12.1 PREPARATION OF SURFACE**

The walls to be plastered to have all joints raked out to a depth of 10mm , if not already done, R.C.C. surface shall be properly hacked to get good key to the plaster. Any unevenness shall be leveled before the plastering is applied. All dust and oil matter if any, shall be brushed and cleaned with a stiff bristle or wire brush, and the surface to be plastered shall be kept wet for 6 hours before plastering is commenced. If the surface becomes dry in spots such areas shall be moistured again to restore uniform surface.

**12.2 PROPORTION OF MORTAR :**

Unless otherwise mentioned, the proportion of external cement plaster for brick or concrete surface shall be 1:4 (1 cement : 4 sand). Sand shall be from approved source free from foreign matter, washed clean if necessary and shall be as per I.S. 1542-1977. No more cement mortar shall be prepared than that can be used within half an hour. The mortar may be hand mixed or machine mixed. In hand mixed mortar, cement and sand in the specified proportion shall be thoroughly mixed dry on a clean impervious platform by turning over at least 3 times or more till a homogeneous and mixture of uniform colour is obtained. Fresh and clean water shall be added gradually through a rose and thoroughly mixed so that mix becomes homogeneous and each particle of sand shall be completely covered with a film of wet cement. Mixing platform shall be so arranged that no deleterious, extraneous material shall get mixed with mortar not the mixing water of the mortar shall flow out.

**12.3 APPLICATION OF PLASTER :**

The plastering shall be done in two coats namely under coat and finishing coat.

**UNDER COAT :**

The under coat shall be of cement mortar 1:4. Water proofing compound of approved make shall be added according to manufacturer's specifications to make the mortar waterproof. Patches of plaster 15 cm x 15 cm shall be put on about 3 m apart as gauges to ensure even plastering in one plane. The thickness of the under coat in any part shall not be less than 8 mm and more than 12mm. The mortar shall be firmly applied with somewhat more than the required thickness and well pressed into the joints and on the surface and rubbed and leveled with a flat wooden rules to give required thickness. Long straight edges shall be freely used to ensure perfectly plane and even surface. All corners must be finished to their true angles or rounded as directed. Plastering shall be done from top downward. Keys shall be formed on the surface by thoroughly combing it with wavy horizontal lines about 12mm apart and 3mm deep when the mortar is still plastic. Under coat shall be cured for not less than 2 days before finishing coat is applied.

**FINISHING COAT :**

Cement mortar for finishing coat shall have washed approved sand with slightly larger proportion of coarse material. The proportion of cement to sand shall be 1:4. The finishing coat shall be of such thickness as to make total average finish to thickness equal to the required plaster thickness as described. The finishing coat shall be not less than 4mm or not more than 8mm thick. The finished surface shall be true and even and shall be present uniform texture throughout and all joining mark shall be eliminated. After application the surface should be finished with a wooden float lying with cork and tapped gently to retain coarse surface texture. A steel trowel shall not be used and overworking shall be avoided. Water shall not be applied to the surface of the finishing coat while working up, but patches showing signs of premature drying may be patted with a damp float. When the finishing coat has hardened, the surface shall be kept moist continuously for 14 days. In any continuously and day to day breaks made to coincide with Architectural breaks in order to avoid unsightly junctions. All mouldings shall be worked true to template and drawn neat clean and level. All exposed angles and junctions with door frames etc. shall be carefully finished as directed.

- 12.4** All plaster work shall be kept moist continuously for a period of 14 days. To prevent excessive evaporation on the sunny or windward side of the buildings in hot dry weather, matting or gunny bags may be hung over on the outside of the plaster in the beginning and kept moist.

**12.5 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in the contract, rates for the item of plaster shall include for the following :

- i. Erecting, dismantling and removing scaffolding.
- ii. Preparing the surface to receive the plaster.
- iii. Providing cement plaster of the specified average thickness, in two coats, including waterproofing compound.
- iv. All labour, materials, use of tools and equipment to complete the plastering as per specifications.

- v. Curing 14 days.
- vi. Any moulding work if shown on the drawings or as specified unless separately provided in the tender.
- vi. Plaster work in hands, arises, rounded angles, fair edges narrow returns, quirks, 'V' joints, splays, drip mouldings, making good to metal frames, junctions with skirting or dados, narrow widths and shall quantities, making good and pipes, conduits, timbers, sills, brackets railings, etc. and making good after all the subcontractors or nominated sub-contractors have done their work.

#### **12.6. MODE OF MEASUREMENT :**

All plastering work shall be measured in square metres. Dimensions shall be measured and quantity worked out correct upto two places of decimals in metre and square metre respectively. If the average thickness of plaster provided by the contractor is more than what is specified on any account, no extra payment will be made. For jambs, soffits, sills, etc. for openings not exceeding 0.5m<sup>2</sup> each in area ends of joists, beams posts, etc. not exceeding 0.5m<sup>2</sup> each in area and openings not exceeding 3m each deductions and additions shall be made in the following manner :

- a. No deduction shall be made for ends of joints, beams, posts, etc. and opening not exceeding 0.5 m<sup>2</sup> each , and no addition shall be made for reveals, jambs, soffits, sills etc. of these openings nor for finishing the plaster around ends of joists, beams, posts etc.
- b. Deductions for openings exceeding 0.5m<sup>2</sup> but not exceeding 3m<sup>2</sup> each shall be made as followed and no addition shall made for reveal, jambs, soffits, sills, etc. of these openings :
  - i. When both faces of wall are plastered with the same plaster, deduction shall be made for one face only.
  - ii. When two faces of wall are plastered with different plasters or if one face is plastered and the other pointed, deduction shall be made from the plaster or pointing on the side of frames for doors, windows, etc. on which the width of reveals is less than that on the other side, but no deduction shall be made on the other side.

In case of openings of area above 3 sqm each, deductions shall be made for the openings but jambs, soffits and sills shall be measured.

#### **12.7 COMBED FINISH :**

All the specification given above for sand finish shall apply to this as well except that in the case of combed finish, the finishing coat will be treated to have combed texture of approved pattern.

#### **12.8 ROUGH CAST FINISH :**

- a. All the specifications given above for sand faced finish shall apply to this as well except for the application of plaster which is described below.

**b. APPLICATION OF PLASTER :**

The plastering shall be done in two coats namely under coat and finishing coat. The under coat shall be done same as in case of sand faced finish. The finishing coat shall contain a fairly coarse aggregate and shall be thrown on as wet mix and shall be left in rough condition. The mortar of the finishing coat shall consist of coarse aggregates of crushed stone or fine gravel of size generally 6 to 12 mm as approved by Executive Engineer and specially graded mixture, mixed with approved sand and cement. The proportion of cement to sand and aggregate/gravel shall be generally 1: 1½ : 3 The mortar shall be flung upon the under coat with large trowels to form an even protection coat,. The finishing coat must be applied while the under coat is still soft and plastic. The thickness of the finishing coat shall be about 12mm unless otherwise specified.

**13. WHITE WASHING, COLOUR WASHING AND DISTEMPERING:****13.1 WHITE WASHING :****A. MATERIALS :**

White wash shall be prepared from fresh burnt fat lime. The lime shall be dissolved in a tub with sufficient quantity of water (about 4/5 litres/kg. of lime) and the whole thoroughly mixed and stirred until it attains the consistency cream. The wash shall be taken out in small quantities and strained through a clean coarse cloth. Clean gum dissolved in hot water shall then be added in suitable proportion of two grams of gum arabic to a litre of lime to prevent the white wash coming off easily when rubbed. Rice seize may also be used instead of gum., gum Regd. Neel colour added for whiteness .

**B. SCAFFOLDING :**

This shall be double or single according to requirements and as directed. If ladders are used pieces of old gunny bags or cloth bags shall be tied on their tops to avoid damage or scratches to the plastered surfaces, etc. proper stage scaffolding shall be erected when white washing the ceiling

**C. PREPARATION OF SURFACE :**

The surface shall be prepared by removing all mortar droppings and foreign matter other means as may be ordered by the corporation's Engineers to produce an approved clean and an even surface. All loose pieces and scales shall be scraped of and holes, cracks etc. stopped with mortar to match with the surrounding finish. In case where the surfaces have been previously white washed or colour washed, the old white or colour wash shall be entirely removed and surfaces broomed down before the new white wash is applied. In case the old white wash cannot be removed by brooming, the surfaces shall be cleaned by scraping.

**D. APPLICATION OF WHITE WASH :**

On the surface so prepared, the white wash shall be laid on with a brush. The first stroke of the brush shall be from top downwards, another from bottom upwards over the first stroke and similarly one stroke from the right and another from the left over the first brush before it dries. This will form one coat. each coat must be allowed dry and shall be subject to inspection and approval before the next coat is applied. When dry, the surface shall show no signs of cracking. It shall present a smooth and uniform finish free from brush marks and it

should not come off easily when rubbed with a finger. Minimum 3 coats of white wash shall be applied.

No portions in the surface shall be left out initially to be patched up later on. For old work, patches and repairs shall be white washed first. Thereafter, the whole surface shall be white washed with the required number of coats. For new work, the white washed surface shall present a smooth and uniform finish. Doors, windows, floors and other articles of furniture, etc shall be protected from being splashed upon. Splashing, droppings, if any, shall be removed and the surfaces cleaned.

**E. RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rates for white wash shall include for the following.

- i. All labour material, equipment required for white washing.
- ii. The surface for white wash including the scaffolding. Scaffolding including erection and removal.
- iii. Providing and preparing the white wash.
- iv. Preparing
- v. Applying the white wash in three coats minimum. If a proper even surface is not obtained to the satisfaction of the Executive Engineer in 3 coats, contractor shall carry out additional coats of white wash to approval at Contractor's expenses.

**F. MODE OF MEASUREMENT :**

The measurement shall be in sq. metre. The mode of measurement shall be as applicable to that for plaster.

**13.2 COLOUR WASH :**

**MATERIAL :**

This shall be prepared by adding approved colouring matter to the white wash (prepared for white washing) according to that required. In all other respects the same conditions and specification as applicable to white wash shall also be applicable to colour wash.

**13.3 DISTEMPERING : POWDERED/DRY DISTEMPER :**

**a. MATERIAL :**

The powdered/dry distemper shall be of approved colour and shade manufactured by M/s Blundell Eomite or other equivalent and approved.

**b. SCAFFOLDING :**

This shall be double or single as required and directed.

**c. PREPARING THE SURFACE :**

The surface to be distempered shall be cleaned and all cracks, holes and surfaces defects shall be repaired with gypsum and allowed to set hard. All irregularities shall be sand prepared smooth and wiped clean. The surface so prepared must be completely dry and free from dust before distempering is commenced. In the case for

walls newly plastered, special care shall be taken to see that it is completely dry before any treatment is attempted. For the old surface which had earlier been distempered, the surface shall be cleaned of grease dust etc. the flaking of previous coatings, if any, shall be taken off. all cracks, holes, and surface defects shall be repaired with gypsum and allowed to set hard and then sand prepared smooth and wiped clean. But in case the surfaces are coloured or white washed, the wash must be removed thoroughly first.

**d. PRIMING COAT:**

The priming coat shall be applied over the completely dry surface in the manner recommended by the makers in the case of patent distempers. When no priming coat is specified by the manufacturer a finely powdered chalk mixed with a thin solution of glue shall be applied to prepare a good, hard background the coating when dry being sand prepared as clean and smooth as possible.

**e. APPLICATION OF DISTEMPER :**

The instructions of the makers shall be followed regarding the preparation of the surface and application of priming and finishing coats. Distemper shall not be mixed in a larger quantity than is actually required for a day's work. Hot water should be used to prepare the mixture. Distempers shall be applied in dry weather with a broad stiff brush in long parallel strokes. The treated surface shall be allowed to dry and harden. Second or succeeding coats shall not be applied until the proceeding coat has been passed by the Executive Engineer. Two more coats of distemper shall be given in exactly the same manner as the first one but only after the earlier coat laid has thoroughly dried.

**f. RATED INCLUDES :**

The rate shall include all labour, materials, equipment and tools for carrying out the following operations:

- i. Providing the primer and distemper and mixing the distemper.
- ii. Scaffolding.
- iii. Preparing the surface to receive the priming and finishing coats.
- iv. Applying the priming coat.
- v. Applying the distemper in 3 coats minimum. If a proper even surface is not obtained to the satisfaction of the Executive Engineer in 3 coats, Contractor shall carry out additional coats of distemper to approval at contractor's expense.

**g. MODE OF MEASUREMENT :**

Similar to that for white washing.

**13.4 OIL BOUND DISTEMPER :**

The specification and conditions for this shall be the same as that applicable for dry distemper above except that oil bound distemper or approved make, shade and colour shall be used after applying priming coat of petrifying liquid or other primer as may be recommended by the manufacturers of distemper or as directed.

**14.0 PLASTIC EMULSION PAINT :****14.1 MATERIAL :**

The emulsion paint and primers in general shall be of approved quality colour and shade as manufactured by M/s Goodlass Nerolac or other equal and approved.

**14.2 SCAFFOLDING :**

This shall be double or single as required and directed. If ladder are used, pieces of old gunny bags or cloth rags shall be tied on their tops to avoid damage of scratches to the plaster surfaces and flooring, etc. Proper stage scaffolding shall be erected when painting the ceiling.

**14.3 PREPARATION OF THE SURFACE :**

a. New surface:

The surface to be painted shall be cleaned and all cracks, holes and surface defects shall be repaired with plaster of Paris for spot filling and with filler prepared with whiting, water and little quantity of paint for filling and leveling the wider areas.

**14.4 PRIMING COAT :**

The priming coat of the approved shade shall be applied over the completely dry surface in the manner as recommended by the paint manufacturers. The emulsion paint, in the priming coat, may be thinned down with 20% water or as recommended by the paint manufacturer. Turpentine or any other solvent shall not be used for thinning the paint.

**14.5 APPLICATION OF EMULSION PAINT :**

The recommendation of approved paint manufacturers, whose product is used shall be followed regarding the preparation of the surface and the application of the priming and finishing coats. The contractor shall arrange for technical assistance and supervision from the paint manufacturer, during the execution of the painting work. After the priming coat has been applied and is perfectly dried all holes scratches if any, shall be repaired as mentioned in "preparation of surface" and then the second coat of approved shade and manufacture shall be evenly applied and allowed to dry. The third coat shall be carefully applied to achieve smooth and even surface after the previous coat has dried up. Minimum 3 coats of paint shall be applied inclusive of primer coat. If a proper and even surface is not obtained to the satisfaction of the Executive Engineer in 3 coats, contractor shall carry out additional coats of painting to approval, at contractor's expense. care shall be taken that dust or other foreign materials do not settle or disfigure the various coats.

**14.6 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rate for the item of plastic emulsion paint shall include for the following :

- i. All labour, materials and equipment necessary to carry out the work.
- ii. Supplying the approved emulsion paint for priming and finishing coats.
- iii. Preparing the surfaces for receiving the primer and finishing coats.
- iv. Scaffolding including its erection and dismantling.
- v. Application of one primer coat and minimum two coats of finishing. If a proper and even surface is not obtained to the satisfaction of the Executive Engineer, in 3 coats, contractor shall carry out additional coats of painting to approval at Contractor's expense.
- vi. Protection to painted surface till dried and handed over.
- ix. Expenses, if any, for supervision and technical assistance supplied by the approved paint manufacturer.

**14.7 MODE OF MEASUREMENT :**

The measurement shall be in square metre. The mode of measurement shall be as applicable to that for white washing.

**15. PAINTING FRENCH POLISHING, WAX POLISHING :****15.1 POLISHING :****15.2 MATERIAL :**

Ready mixed oil paints and primers, in general shall be of approved quality, colour and of approved manufacturer. These materials shall be in sealed tins and shall be opened in the presence of the Corporation's Engineer on site.

**15.3 PREPARATION OF SURFACE :**

a. **IRON AND STEEL WORK** : Surface to be painted shall be thoroughly cleaned and sand papered and/or rubbed with Emery cloth, if necessary, to remove grease, mortar or anything foreign material. In case of rusted surface, it shall be first cleaned with wire brush till the corroded rust is removed. The prepared surface shall be shiny and free from brush marks, patches, blisters and other irregularities. The surface thus finished shall be got approved for painting.

b. **WOOD WORK** :

All surfaces to be painted shall be thoroughly cleaned, sand papered and removed of all foreign materials. In case of surfaces having knot and nail holes, the same shall be filled with knotting and stopping materials. The knotting material shall consist of pure shellac dissolved in methylated spirit. Stopping materials shall consist of putty. The surfaces thus treated shall be allowed to dry and then sand papered smooth.

**15.4 APPLICATION :**

After preparing the surface a primer coat shall be applied. The primer coat should be ready mixed of approved make and manufacturer. After the primer coat is applied and perfectly dried, all holes, cracks etc, if still remaining, shall be filled in with putty and the surfaces sand papered smooth. Then a second coat of paint of approved shade and manufacture shall be evenly applied and allowed to dry. The third coat shall be carefully applied to achieve smooth and even surface after the previous coat has dried up. Minimum 3 coats of paint shall be applied to inclusive of a primer coat. If a proper and even surface is not obtained to the satisfaction of the Executive Engineer in 3 coats, Contractor shall carry out additional coats of painting to approval, at Contractor's expense. Care shall be taken that dust or other foreign material do not settle or otherwise disfigure the various coats.

**15.5 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rate for the item of painting shall include for the following:

- i. All labour, materials, and equipment necessary to carry out the work.
- ii. Supplying the approved paint for priming and finishing coats.
- iii. Preparing the surfaces including knotting and stopping for receiving the primer and finishing coats.
- iv. Scaffolding including its erection and dismantling.
- v. Application of one primer, coat and two coats of finishing minimum. If a proper and even surface is not obtained to the satisfaction of the Executive Engineer in 3 coats. Contractor shall carry out additional coats of painting to approval at Contractor's expense.
- vi. Protection to painted surface till dried and handed over.

Mode of measurement:

Normally painting to wood work and steel shall be included in the concerned items of work and shall not be measured separately. If painting is to be measured separately the same will be as per I.S.:1200-1964. part –15

**15.6 FRENCH POLISHING :**

French polish to be used shall comply with I.S. 348-1952 in the requirements of quality and methods of test. Before French polish is applied, the surface of wood work shall be prepared in the same manner as for painting. The wood to be polished should be first painted with a filler composed of 1 part of whiting mixed with 0.53 part of methylated spirit. After drying, it should be finely sand papered. On the wood work thus treated a thin coat of French polish shall be applied and allowed to dry. After drying the surface shall be lightly rubbed with a lime sand paper prior to the second and third coat. The surface shall show an even polished surface and be approved by the Executive Engineer (Corporation's Engineer).

**15.7 RATES TO INCLUDE :**

Similar to that of painting.

**15.8 MODE OF MEASUREMENT :**

Similar to that of painting.

**15.9 WAX POLISHING :**

- a. The polish shall be of approved manufacture (e.g., Mansion Brand) or shall be prepared as under :
- b. A mixture of Bee's wax and turpentine in proportion of 2:1 by weight shall be used. The wax is melted and added to the turpentine, mixed well and allowed to cool.
- c. The surface of wood work shall be prepared as for oil painting before mixing. The wood work shall be measured with the mixture and allowed to remain overnight so that the mixture may soak into the pores of the wood. In the morning the superfluous wax shall be wiped off and the surface rubbed up with a soft flannel to a fine polish.

**15.10 RATES TO INCLUDE :** Similar to that of painting.

**15. 11 MODE OF MEASUREMENT :** Similar to that of painting.

**16. CEMENT PAINTING :****16.1 MATERIAL :**

External waterproof painting shall be of approved colour. Manufacture - Snowcem/ Durocem or other equivalent and approved quality.

**16.2 PREPARATION OF SURFACE :**

Before painting is commenced on surface, all dirt, oil, grease, efflorescence and organic material shall be completely removed. The surface shall be wetted by sprinkling of water with fine spray. The surface shall be sprayed several times with a few minutes intervals between each spraying to allow the moisture to soak into the surface.

**16.3 APPLICATION :**

Cement paint solution shall be applied to the surface with hair brushes in a number of coats to get uniform finish. After the first coat of paint is hardened, it shall be cured with water at least for 24 hours, before the application of the second coat. At least 24 hours should elapse between the two coats, similarly, 3rd coat shall be given to get uniform colour.

**16.4 CURING :**

**Cement paint work shall be kept damp at least for 7 days.**

**16.5 RATES TO INCLUDE :**

Apart from other factors mentioned elsewhere in this contract, the rate of providing cement paint shall include for the following :

- a. All labour, materials and equipment to provide cement paint.
- b. Scaffolding including erecting and removing.
- c. Preparing the surface as stated above.
- d. Applying 3 coats of approved Snowcem paint. If a proper and even surface is not obtained to the satisfaction of the Executive Engineer in the 3 coats applied, the Contractor shall provide additional coats painting to approval, at Contractor's expense.
- e. Curing as stated above.

**16.6 MODE OF MEASUREMENT :**

Measurement shall be in Square Metre and as applicable to white wash. Nothing extra shall be allowed for painting the rough surface, for example, external sand faced plaster rough cast plaster etc.

**17.0 TECHNICAL SPECIFICATIONS FOR INTERIOR WORKS****Material and Workmanship**

1. All materials brought on the site of works and meant to be used for the said project site, shall be the best of their respective kinds and to the approval of the Employer. The Employer or his Representative will accept that the materials are really the best of their kinds, when it is proved beyond doubt that no better materials of the particular kind in question are available in the market.
2. The workmanship is to be the best available and of a high standard, use must be made of a special tradesman in all aspects of the work and allowances must be made in the rates for so doing.
3. Samples of all materials shall be got approved from the Employer and shall be deposited with them before the order for the materials are placed with the suppliers/manufacturers. The materials brought for the works shall conform in every respect with approved samples.
4. Workmanship: All works shall be to true line, level, plumb and square corners, edges and arises in all cases shall be unbroken and finished neat. Only first class workmanship will be accepted. Contractor shall maintain uniform quality and consistency in workmanship throughout the execution of the work.
5. Skilled Mistries / tradesman for the respective trades shall be employed by the Contractors to check the work in progress and to instruct and extract the right kind of workmanship from the men employed on the works. Instructions given to such Mistries by the Employer shall be carried out with a view to get the work executed in a neat and workman like manner, according to the specifications.
6. The Employer may order the inspection of any finished work as he chooses and in a manner he decides, and the Contractors shall bear all expenses in this connection. If the results of such inspection prove that the material used and/or workmanship is not of the standard required, the work will be rejected and removed forthwith and be replaced by works of the accepted standard of quality and material.
7. The materials and items to be provided by the Contractor shall be approved by the Employer in accordance with any samples, which will be submitted for approval by the Contractor and generally in accordance with the specifications. Also if products are specified in the specification and/or bill of brand, trade name or catalogue reference, the Contractor will be required to obtain the approval of the Employer before using a material. The Contractor shall produce all invoices vouchers or receipts for any materials if called upon to do so by the Employer.
8. Samples of all materials are to be submitted to the Employer for approval before the Contractor orders or deliver the materials at site. Samples together with their packing are to be provided free of charge by the Contractor and should any materials be rejected, they will be removed from the site at the Contractor's expense. All samples will be retained by the Employer for comparison with materials, which will be required to submit specimen finishes of colours, fabrics, etc. for the approval of the Employer before proceeding with the work.

All ends of plywood/Block board/particle board/MDF/HDF shall be fitted with minimum 6 mm T.W. lipping strips.

All internal surfaces of furniture shall be finished with French polish wherever any finishes not specified.

**Joinery in Woodwork**

Joinery is to be prepared immediately after the placing of the contact framed up, bonded and wedged up. Any portions that are warped or found with other defects are to be replaced before

wedging up. The whole of the work is to be framed and finished in a proper workman like manner in accordance with the detailed drawings, wrought and whenever required fitted with all necessary metal ties, straps, belts, screws, glue, etc., running beaded joints are to be cross-tongued. Joiners work generally to be finished with the sand/glass paper.

All joints will be standard mortise and tenon, dowel, dovetail and cross-halved. Nailed or glued butt joints will not be permitted. Screws, nail etc., will be stated, from or wire of oxidized "Nettle Fold" make unless specified where mortise and tenon joints are used, tenons should fit the mortises exactly.

Nailed or glued butt joints will not be permitted, except in exceptional cases with approval of the Employer.

Where screws shown on a finished surface, these will be sunk and the hole plugged with wood plug of the same wood and grains of the finished surfaces unless detailed otherwise. Nail on finished surfaces will be neatly punched and the hole filled with wood filler to match the colour.

Should joints in joiner's work open, or other defects arise within the period stated for defect liability in the contract and the cause thereof be deemed by the Employer to be due to such defective joinery shall be taken down, and refilled, redecorated and/or replaced if necessary and any work disturbed shall be made good at the Contractor's expense.

Nails, spikes and bolts shall be of lengths and weights approved by the Employer. Nails shall comply with IS 1959-1960 or approved equivalent quality sample. Brass headed nails are to comply with B.S. 1210. Wire staples shall comply with B.S. 1994 or equivalent.

The contact surfaces of dowel, tennons, wedges, etc., shall be glued with an approved adhesive.

Where glued joinery and carpentry work is likely to come into contact with moisture, the glue shall be waterproof.

All dovetail joints shall be further strengthened with M.S. cleats for cabinet furniture like tables, storage units, etc.

### **Hardware**

The hardware throughout shall be of approved manufacturer or supplier well made and equal to in every respect to the samples deposited with the Employer. The Contractor may be required to produce and provide samples from many different sources before the Employer takes decision and nothing extra shall be paid for this.

Fitting generally shall be brass oxidized, unless otherwise specified and shall be suitable for their intended purpose. In any case, it will have to be approved by the Employer before the Contractor procures it at the site of work.

Screws are to match the finish of the article to be fixed, and to be round or flat headed or counter sunk as required.

The Contractor should cover up and protect the metal surfaces such as brass, bronze, SS etc. with a thick grease or other suitable protective material, renew as necessary and subsequently clean off and clear away on completion.

Aluminum and stainless steel shall be of approved manufacture and suitable for its particular application. Generally the surface of aluminum shall have an anodized finish and both shall comply

with the samples approved by the Employer. All stainless steel sheets shall be 304 S. S. Japan or equivalent with gauge as specified but not thinner than 16G.

All steel, brass, bronze, aluminum and stainless steel articles shall be subjected to a reasonable test for strength, if so required by the Employer at the Contractor's expense.

All brazing and welds are to be executed in a clean and smooth manner rubbed down and left in the flattest and tidiest way, particularly where exposed.

Chromium plating shall be in accordance with I. S. standard or as per approved specifications for normal outdoor conditions and shall be on a base material of copper or brass.

### **Glazier**

All glass to be of approved manufacturer complying with IS 1548-1966 as per approved quality and sample to be of the selective qualities specified and free from bubbles, smoke, wanes, waves, air holes and any other defects.

Polished plate glass shall be "glazing glass" (G.G.) quality and that for mirrors shall be "silvering quality" (S.Q.) confirming to I.S.3438 – 1965 or as per approved sample and quantity.

The compound for glazing to metal is to be a special non-hardening compound manufactured for the purpose and of a brand and quality approved by the Employer.

While cutting glass, proper allowance is to be made for expansion. Each square of glazing to be on whole sheet. On completion of work clean all glass inside and outside, replace all cracked scratched and broken panes and leave in good condition.

### **Paint and Polishes**

All material required for the works shall be of specified and approved manufacturer, delivered to the site in the manufacturer's containers with the seals, etc., unbroken and clearly marked with the manufacturer's name or trade mark with a description of the contents and colour. All materials are to be stored on the site of work.

Spray painting with approved machines will be permitted only if written approval has been obtained from the Employer prior to painting. No spraying will be permitted in the case of priming coats where the soiling of adjacent surfaces is likely to occur. The nozzle and pressure to be so operated as to give an even coating throughout to the satisfaction of the Employer. The paint used for sprayings is to comply generally with the specifications concerned and is to be specially prepared by the manufacturer for spraying. Thinning of paint made for brushing will not be allowed.

Wood preservative shall be Solignum or other equal and approved impregnating wood preservative and all concealed woodwork shall be treated with wood preservative.

All brushes, tools, pots, kettles, etc., used in carrying out the work shall be clean and free from foreign matter and are to be thoroughly cleaned out before used with a different type of class of material.

All iron or steel surfaces shall be thoroughly scraped and rubbed with wire brushes and shall be entirely free from rust, mill scale, etc., before applying the priming coat.

Surfaces of new woodwork, which are to be painted, are to be rubbed down, cleaned down to the approval of the Employer.

Surfaces of previously painted wood work which are to be painted are to be cleaned down with soap and water detergent solution or approved solvent to remove dirt, grease, etc. Whilst wet the surface shall be flattened down with a suitable abrasive and then rinsed down and allowed to dry. Minor areas of defective paint shall be removed by scraping back to a firm edge and the exposed surface touched in with the primer as described and stopped with putty. Where woodwork has been previously painted or polished and is to be newly polished, scraping, burning off or rubbing down, should be carried out properly.

Surfaces of previously painted metal which shall be painted are to be cleaned down and flattened down as described in surfaces of any rust and loose scale shall be removed completely by chipping, scraping and wire brushing back to the bare metal touched in with primer as described.

### **Upholstery**

This will be of first class standard workmanship with webbing, no sag springs, coiled springs, padding and as specified on drawing. Covering fabrics will be soon tufted and corded as shown on drawing and as approved by the Employer.

“Cushion Vents” should be installed at the back or under side of seat cushions (especially those covered in leather, vinyl plastic or very tightly woven fabric) to allow air to escape and to prevent torn steel.

Finished timber shall be of the type specified, furnishing fabrics, colour, pattern, substance to be as specified and manufactured or supplied by the Company specified, no variations of this will be permitted unless with prior approval of the Employer.

### **Polish**

**French polish:** The basic material shall be shellac dissolved in methylated spirit.

Preparation: The timber must be well sanded and cleaned and the grain filled with grain filler. Any staining must be done before applying the polish.

Equipment: The polishing rubber, the most important implement in French polish shall consist of a pad of cotton wool, which acts as a reservoir for the polish, and a cover of a soft white linen or cotton fabric similar to a well worn handkerchief, which acts as filler. The rubber must never be dipped into the polish on to the pad with the cover removed.

Application: Work evenly over the surface with a slow figure of eight motion until the timber is coated with a thin layer of polish. The object is to apply a series of thin coats, allowing only a few minutes for drying between the coats. When a level and even bodied surface is obtained the work is ready for the second stage i.e., spiriting off.

Allowing the work to stand for at least eight hours, then take a fresh rubber with double thickness of cover materials and charge it with methylated spirit. The object of spiriting off is to and remove the rubber marks and to give the brilliance of finish.

Finally, work in the direction of the grain and continue until the surface is free from smears and rubber marks then leave to harden off.

**Wax polish:** Wax polish shall contain silicones and driers. A good silicon wax is to be used, not a creamy or spray. The timber shall be sealed first with another finish such as Ronseal, before applying the wax.

Application: Apply a light coat of the sealer by brush or cloth direct to the unfilled timber, working it well in and finishing evenly with the grain. Allow to dry thoroughly then sand lightly with fine abrasive paper. Apply a heavy coat of wax by cloth or on flat surfaces, with a stiff brush. Work well into the timber and finish off by stroking with the grain before leaving to harden. Leave for several hours before rubbing up with a soft brush. Finally, buff the grain with a soft cloth.

**Melamine:**

This shall be applied where natural grain of the wood is required to be shown. Melamine gives uniform surface, which resists boiling water.

Application: Clean off all grease and wax with an abrasive and white spirit, this should not be applied in humid conditions.

Apply the same coat, preferably of clear hard glaze with a cloth pad. Leave this to dry for at least six hours, then apply the coat with paint brush-off you wait for longer than 24 hours between coats, rubbed down the previous coats with fine glass paper or medium grade of steel wool. Obtain a matt finish, if required, by giving a final coat of clear Ronseal Matt Coat.

**Timber**

Wherever specified internal frame works shall be of central province teak wood (C.P.T.W.) unless otherwise specified.

All exposed woodwork shall be of first quality B.T.C. grade teak only or as specified.

All the wood shall be properly seasoned, natural growth and shall be free from worm holes, loose or dead knots or other defects, saw die square and shall not suffer warping, spitting or other defects.

The moisture content shall not exceed 12%.

All internal frameworks shall be treated with approved wood preservative.

All wood brought to site shall be clean, should not have any preservative or Other coating/covering.

All rejected, decayed bad quality wood shall be immediately removed from site.

All wood brought to site must be stacked stored properly as per instruction.

**PLYWOOD**

Fire Retardant Plywood/medium density fiber board/block board/teak particleboard/veneered board, etc., as specified in the approval list of manufacturers shall only be used. Fire Retardant Plywood shall confirm to I.S. 5509

Marine plywood shall generally confirm to I.S. 710-1980 and also to Defense/Navy specification, bonded with phenol formaldehyde treated with Wood preservative.

Only teak wood particle board shall be used, particle board shall be phenol formaldehyde and generally confirm to I.S. 3087-1965.

Only 3mm to 4mm thick straight grained group matching approved veneers shall be used. Only veneers laminated from species like teak, maple white cedar, rosewood, white cedar, walnut, mahogany shall be considered for approval and use.

Block board shall be equal or superior quality to that laid down in B.S. 3444 with one of the following I.S. Specifications or such approved adhesives;

I.S.I. 851-1957: Synthetic resin adhesive for construction works in wood.

I.S.I. 849-1957: Cold setting case in glue for wood.

Block board shall be generally conforming to I.S.I. 1659-1960 or as per approved sample.

### **Laminates**

High Pressured Laminates where specified shall be of approved brand, type, texture and thickness and manufactured as per IS:2046-1969. Fixing of laminates shall be done as per best trade practices and strictly as per printed instructions of the manufacturers using Phenol Formaldehyde Synthetic Resin Adhesive of approved make. Unless otherwise indicated laminates shall be 1.5 mm thick for horizontal surfaces, 1.0 mm thick for vertical surfaces and 0.8 mm thick on internal surface.

### **G.I. Frame Work for Partitions:**

G.I. frame work shall be made of special section power pressed /roll from G.I. Sheet with Zinc coating of 120 gms/Sqm (both side inclusive) of 0.5 mm thick section.

### **Iron Mongery**

All finish hardware shall be well made, reasonably smooth and free from sharp edges and corners flaws and other defects and shall be as per relevant Indian Standard Code. Unless otherwise required, all finish hardware shall be polished brass.

All hardware shall be of approved make and shall be specifically got approved by the Employer before ordering. No fittings and fixtures shall be fixed before all major work is over. While fixing correct handling of fixtures shall be ensured.

All finish hardware shall be fixed by skilled Carpenters experienced in this work. Work shall be done as per manufacturers printed instructions and to the satisfaction of the Employer.

All hardware fixed to respective locations shall be adequately protected from damage and splashes of mortars and paints by covering suitable with Jute Cloths/Black PVC sheet till handing over the work to the Employer to his satisfaction. The finished hardware shall be absolutely clean without any foreign materials and fully showing the original finish in its best condition.

## **SPECIAL CONDITIONS:**

### 1. PHOTOGRAPHS OF THE BUILDING

1.1 The contractor shall submit 3 sets of the prints of the photographs size 4"x6" to LIC of India at various stages:

- a. Before commencement of the work.
- b. During progress of work.
- c. Completion before handing over the building

The photographs can also be submitted in CD/DVD in lieu of printed photographs.

One or more photographs shall be taken to have complete clear views of the project as directed by Corporation's Engineer.

1.2 The quoted **Percentage Rate** shall include for the same and no extra is payable to contractor on this account.

2 Contractors shall note that the site is working office building. Hence, contractor shall take into account this aspect and quote their percentage accordingly.

3 Contractors are advised to inspect the site before quoting their **RATE**. The contractors shall also note that they have to co-operate with other agencies carrying out the work(s) of LIC of India in the same site.

4 Deleted.

5 Deleted.

6 All statutory fees to be paid to municipal, water and sewerage authorities, water supply connection, sewerage connection and road cutting etc ., will be paid/reimbursed by LIC against production of receipts towards payments of such fees. No overhead charges shall be paid in this regard.

7 The contractors shall not stack building materials on footpath and road margin.

8 The contractor shall thoroughly clean all the dust and dirt's, debris etc. and remove all the scaffoldings and other materials used for the works away from the site as and when needed. Disposal of the debris and other Surplus unserviceable materials should be done in such a way that the site is kept free from such unwanted materials.

9 The site is located in commercial area and therefore Contractor shall take all precautions to cause least inconvenience to the neighbors /surroundings during the work.

10. There may be some traffic restrictions with regard to heavy vehicles since the site is located in commercial area. Contractor shall take note of the same and obtain necessary permission from appropriate authorities for transportation of materials required for the construction. In case work is required to be done during the night time, permission from the Employer as well as local/police authorities shall be taken.

11 Noise pollution should be kept at minimum tolerance level.

12 Contractors to note that if hutments for labour provided at site all the necessary facilities etc., shall be done as per statutory labour laws.

**13. OTHER SPECIAL CONDITIONS:**

- i) Passenger Lifts of building cannot be spared for lifting materials to work site.
- ii) Laborers may allow at site only after showing photo I-Card issued by the agencies and duplicate of which is to be submitted to Branch office.
- iii) Gate pass for daily labour may be issued by Branch Office.
- iv) Every effort should be made to restrict the movement beyond working area.
- v) Materials can be taken away only after getting gate pass from Branch Office.
- vi) **Well co-ordination should be maintained with all agencies and designated coordinator from LIC side to avoid any kind of disturbances in office working.**
- vii) Every day, before the office starts the common area / working area should be cleaned in all respect if this area is used anyway for the work.
- viii) LIC is no way responsible for issuing way bill or C – form to any agencies.
- ix) During the execution of the work, the cleaning of pavements to be done on day to day basis.
- x) The work is to be carried out in the working office Building with least disturbance to the occupants/staff and therefore the work may have to be carried out in phased manner but entire work is to be completed within stipulated time limit. No consideration shall be given for extension of time limit on account of work taken in phases. Quoted Rate shall also include shifting of existing furniture, storage units etc during execution of work and rearranging at new/old position/place for normal office working.
- xi) All attention is to be paid to avoid any inconvenience of office working. In case of disruption of power or data/telephone cable during working, it shall be set right immediately, failing which the employer shall engage electrician/workmen for restoration and the cost shall be recovered from his payments.
- xii) The contractor has to depute sufficient number of supervisory staff for making all arrangements and to ensure no disturbance to occupants.
- xiii) It is responsibility of the contractor to adhere to all security measures for the workers.
- xiv) The Contractors has to ensure protection to building and other assets including parked vehicles in the campus. In case of any damages caused due to work or due to ignorance of ant worker, contractor has to make good the damages and / or compensate the LIC for the damages done.
- xv) Contractor is advised to inspect the site before submitting the tender and examine all parts of the work.
- xvi) All fabrication works has to be carried out outside the office premises at Contractor"s own arrangement and rate quoted shall include for the same.

14. ~~The quantities shown in the schedule i.e. Interior, Civil, Air-conditioning, Modular Furniture, Chairs, Electrical Installation, DATA & Telephone cabling, Fire Alarm and public address system are provisional and are likely to increase or decrease. Some of the items may be omitted altogether. No claim whatsoever shall be entertained on this account.~~

15. The Clause No 37 of conditions of contract , Clauses no 14 & 20 of General Instruction to Contractors for work and Annexure-D i.e, Form of Bank Guarantee to secure a lump sum advance, shall be treated as deleted.
16. All works in course of execution or after execution in pursuance of the Contract, shall at all times be open to the inspection and supervision of the Executive Director (Engineering) or his authorized representatives and the Contractor or his responsible agent, duly accredited in writing, shall at all such times, be present to receive instructions/orders. The work during the progress or any time before settlement of the final bill, is also liable to be inspected by Chief Technical Examiner of the Central Vigilance Commission, New Delhi, on behalf of the Employer and this shall be also considered as an inspection by the Employer for all purpose.
17. Contractors to note that the quoted rates shall be firm throughout the currency of the contract. The escalation towards materials, labour etc. is not allowed and will not be paid.
18. Price variation of materials shall not be allowed where the basic price of materials is mentioned in the respective items. However, if the purchase price of materials is less than the basic price of materials, the recoveries shall be made from the contractor bills.

#### **19. TESTING OF MATERIALS**

During the progress of work, tests as prescribed below for various materials of construction shall be conducted as per the frequency as directed. **Contractor's attention is also drawn to Clause 9 of Conditions of Contract as well as Clause 9 of General Preambles to Schedule of Quantities.**

20. All the participating bidder must have valid GST Registration Certificate of a particular State/ union territory at the time of submission of the bid. In the eventuality of not having valid GST Registration Certificate with the state / union territory, where implementing works contract, the successful bidder will be required to obtain GST registration certificate of the particular state/ union territory where the works contract will be implemented within a period of 21 days from the date of issuance of letter of acceptance, failing which the letter of acceptance will be withdrawn and cancelled. Earnest Money Deposit will also be forfeited. No extension of time period will be given whatsoever unless there remains unforeseen impediments with the issuing authority of such GST Registration.

### **GENERAL PREAMBLES TO SCHEDULE OF QUANTITIES**

These preambles apply to all the sections of the "Schedule of Quantities".

#### **1. RATE TO COVER:**

- 1.1 The rates quoted by the Contractor shall be held to include for providing and fixing, all conveyance and delivery, loading & unloading, carrying in, storing, hoisting, all labour, setting, fitting and fixing in position, making straight, cutting, waste, return of packing and all materials and labour and everything else necessary for the proper completion of each item of work to the approval of Corporation's Engineer and for Establishment Charges, overheads and profits. The Contractor shall provide at his expense all labour, materials and things required by the Corporation's Engineer for testing and measuring the work, for weighing, testing the efficiency of any portion of the work, all planking, gangways etc. necessary for affording access to every part of the work except where specifically stated otherwise.
- 1.2 The Contractor should also cover in his rates for the method of work, cost of materials, labour etc., to comply with the "Trade Specifications", General Instructions to Contractor", "Conditions of Contract", "Special Conditions", (if any), and all documents of this contract.
- 1.3 All the materials or procedures or specifications for work, unless otherwise stated, shall conform to the current Indian Standard whether or not specific mention is made thereof. The Contractor shall be responsible for and shall replace or make good at his own expense, any materials lost or damaged, or of quality not approved, temporarily disturbed roads, pavements, approaches, gates, walls or any such dismantling carried out to execute the work.
- 1.4 All rates quoted shall include for Supplying and fixing although the same may not have been mentioned in the item of the Schedule of Quantities. Words "Providing and Fixing where used shall have same meaning as "Supplying and Fixing".
- 1.5 **Rates quoted shall include for hoisting to any height and the work at all levels and lifting of Materials and working at any height shall not form any criterion for any extra claims, except where otherwise specified in Schedule of quantities.**

#### **2. ANCILLARY WORKS:**

- 2.1 The Contractor shall have to carry out all ancillary and connected work within and near vicinity of the plot of the proposed work and inside the Building if ordered to do so by the Chief Engineer at the rates quoted in the Schedule of Quantities, at any time during the currency of this Contract including extension of time, if any granted.

**3. PRICE FLUCTUATION / VARIATION:**

- 3.1 Rates quoted by the Contractor shall be firm throughout the currency of the Contract including extensions of time, if any granted. No price adjustment due to variation in cost of materials or labour or any variation under any State or Central Legislation or any other reason whatsoever shall be allowed, except as stated in relevant clauses below with regard to variation in price on materials & labour and price fluctuation in Cement & Steel.

**4. "PRINCIPAL MAKE/S OR OTHER EQUAL AND APPROVED" FOR MATERIALS / PRODUCTS:**

- 4.1 The Contractor shall note that materials having "ISI" monogram shall primarily be used in the work. If in the tender "Certain Principal Make / Makes or other equal and approved of any material / Product is mentioned in any item or Trade Preambles relating to the particular items in its respective Trade Schedule, the Contractor shall have to use the Principal Make/Makes specified in the relevant item or the trade Preambles. In case the specified particular Principal make / makes of the materials product is/are not readily available, the Contractor shall take prior permission and approval of the Chief Engineer in writing before use of the alternative equivalent make of the Material / Product.
- 4.2 All principal makes specified for any item shall be treated at par as per the accepted quoted rate.
- 4.3 Use of the make other than the Principal Make/Makes (which shall be treated as an Equivalent make) shall be at the discretion of the Chief Engineer and such Make/Makes shall be used after the approval of the Chief Engineer.
- 4.4 In such cases the Contractor will not be paid any extra payment over the accepted quoted rate in any case. However if it is ascertained that the price of approved Equivalent Make or the Material/product is lower than that for the Principal Make/Makes of the same material / product the difference of the price shall be payable by the contractor to LIC. Such difference of price shall be suitably decided by the Chief Engineer whose decision shall be final and binding to the Contractor in this regard.

## **ANNEXURE “M”**

### **MEASUREMENTS:**

All the measurements are to be done in Digital Measurement Recording System as mentioned below :

1. All the measurements should be recorded in Excel format (Annexure A1 & A2) by the Contractor at the site as works progress. The description of items is to be imported in totality from the approved protected soft file (Excel file) of BOQ in the tender. However any inadvertent deviations after importing the file, the original contract document will prevail upon.

Any extra / deviated work executed during the period will also be measured in EXCEL format after following all laid-down processes.

2. The EXCEL sheet measurement will be submitted by the Contractor to the LIC Site Engineer in both Hard and soft format. The measurement will then be checked 100% by LIC Site Engineer and if required, the same shall be corrected by LIC Site Engineer to established that the measurements that given by the Contractor is in order and complete in all respect.

3. The corrected hard copy of the EXCEL measurement sheet thereafter will be test checked by the higher officials as per the laid down process and if there exists zero correction, such EXCEL measurement sheet will be PDF formatted.

All concealed measurements shall be verified by LIC Site Engineer and Test Checked by Higher Officials, wherever required, before its concealing and hard copy duly signed by Contractor and LIC Engineers shall be maintained / preserved.

4. If there is any variation of measurement after the test checking, the particular measurement shall be re-entered by the LIC Site Engineer and then the corrected EXCEL measurement sheet will be converted to PDF format. A print of such PDF formatted Measurement Sheet will be taken and signed by the LIC Site Engineer and the Contractor on the hard copy (Refer Annexure A1 & A2)

5. Abstract of Bill (Annexure B) in EXCEL and PDF will be submitted by Contractor. The description of the items, Tender Quantity, Unit and Rate will be imported from the approved soft file of BOQ in the Tender. The Contractor will only lay-in the quantities of the corresponding item from the PDF formatted measurement sheet. However any inadvertent deviations after importing the file, the original contract document will prevail upon.

6. The hard copy of PDF formatted measurement sheet, Bill Processing Note initiated by the LIC Site Engineer and Abstract Sheet as corrected by LIC Site Engineer (attached as per Annexure B) will be submitted to Engineering Accounts Section for all necessary verification. The soft copy of measurement sheet and abstract sheet in EXCEL format may also be submitted to Accounts section to facilitate speedy checking of Bills. However the correction done by Accounts section will be done only on hard copy of PDF formatted measurement sheet and Abstract Sheet. The Certified Contract Documents must be referred during Accounts checking.

7. After scrutiny of bill and certification of Engineering Accounts section, all corrected document in hard copy will be shared with the Contractor.

8. The Contractor on receipt of the Corrected Hard Copy of the Abstract of Bill from LIC will prepare their Tax Invoice on their letter head (A sample copy is attached for reference as per Annexure C) and submit to LIC of India for further processing of their Bill for release of payment. The Tax Invoice will have zero correction.

9. After all account verification is over, the RA Bill and measurement sheet of the Contractor will be numbered containing the details of the work, date of commencement etc and the same will be kept in hard bound form in a particular folder till the project work is completed and thereafter also.

### Annexure A1

| E-MEASUREMENT SHEET |                                                                                                  |      |     |        |         |     |     |                |
|---------------------|--------------------------------------------------------------------------------------------------|------|-----|--------|---------|-----|-----|----------------|
|                     | Bill No. :                                                                                       |      |     |        |         |     |     |                |
| i                   | Name of the Work                                                                                 |      |     |        |         |     |     |                |
| ii                  | Agreement No. & Date / Contract Ref :                                                            |      |     |        |         |     |     |                |
| iii                 | Name of the Construction Associate & Address                                                     |      |     |        |         |     |     |                |
| iv                  | Name & Designation of LIC Measurer with SR No.                                                   |      |     |        |         |     |     |                |
| v                   | Period of Measurement                                                                            |      |     |        |         |     |     |                |
| vi                  | Name of the Contractor's authorized Engineer/s attending measurement. Authorization Letter ref : |      |     |        |         |     |     |                |
| Item No.            | Description of Item                                                                              | Unit | No. | Length | Breadth | D/H | Qty | Remarks/ Notes |
|                     |                                                                                                  |      |     |        |         |     |     |                |
|                     |                                                                                                  |      |     |        |         |     |     |                |

### Annexure A2

| E-MEASUREMENT SHEET (Reinforcement ) |                                                                                                  |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
|--------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------|------------------------------|---------|---------------------------------------------------|-------|-------|-------|-------|-------|-------|--|--|
|                                      | RA Bill / Final Bill                                                                             |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| i                                    | Name of the Work                                                                                 |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| ii                                   | Agreement No. & Date / Contract Ref :                                                            |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| iii                                  | Name of the Construction Associate & Address                                                     |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| iv                                   | Name & Designation of LIC Measurer with SR No.                                                   |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| v                                    | Period of Measurement                                                                            |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| vi                                   | Name of the Contractor's authorized Engineer/s attending measurement. Authorization Letter ref : |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
| Description of RCC                   | No. of RCC members                                                                               | Number of reinforcement bars | Length of reinforcement bars | Remarks | Diameter of bars and total length as per Column 7 |       |       |       |       |       |       |  |  |
|                                      |                                                                                                  |                              |                              |         | 8 mm                                              | 10 mm | 12 mm | 16 mm | 20 mm | 25 mm | 32 mm |  |  |
|                                      |                                                                                                  |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
|                                      |                                                                                                  |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
|                                      |                                                                                                  |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
|                                      |                                                                                                  |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |
|                                      |                                                                                                  |                              |                              |         |                                                   |       |       |       |       |       |       |  |  |

**Annexure – B**

| ABSTRACT SHEET |                                                                                                  |                     |      |                 |                        |                  |                           |            |              |
|----------------|--------------------------------------------------------------------------------------------------|---------------------|------|-----------------|------------------------|------------------|---------------------------|------------|--------------|
|                | RA Bill / Final Bill                                                                             |                     |      |                 |                        |                  |                           |            |              |
| i              | Name of the Work                                                                                 |                     |      |                 |                        |                  |                           |            |              |
| ii             | Agreement No. & Date / Contract Ref :                                                            |                     |      |                 |                        |                  |                           |            |              |
| iii            | Contract Amount                                                                                  |                     |      |                 |                        |                  |                           |            |              |
| iv             | Name of the Construction Associate & Address                                                     |                     |      |                 |                        |                  |                           |            |              |
| v              | Name & Designation of LIC Measurer with SR No.                                                   |                     |      |                 |                        |                  |                           |            |              |
| vi             | Period of Measurement                                                                            |                     |      |                 |                        |                  |                           |            |              |
| vii            | Name of the Contractor's authorized Engineer/s attending measurement. Authorization Letter ref : |                     |      |                 |                        |                  |                           |            |              |
| viii           | Date of Submission                                                                               |                     |      |                 |                        |                  |                           |            |              |
| Sl No.         | T. Item No.                                                                                      | Description of Item | Unit | Tender Quantity | Qty upto previous Bill | Qty in this Bill | Cumulative Total Quantity | Rate in Rs | Amount in Rs |
| (1)            | (2)                                                                                              | (3)                 | (4)  | (5)             | (6)                    | (7)              | (8)=(6)+(7)               | (9)        | (10)         |
|                |                                                                                                  |                     |      |                 |                        |                  |                           |            |              |
|                |                                                                                                  |                     |      |                 |                        |                  |                           |            |              |
|                |                                                                                                  |                     |      |                 |                        |                  |                           |            |              |
|                |                                                                                                  |                     |      |                 |                        |                  |                           |            |              |

**Annexure - C**

| DRAFT INVOICE     |             |                     |      |                 |                        |                  |                           |            |              |
|-------------------|-------------|---------------------|------|-----------------|------------------------|------------------|---------------------------|------------|--------------|
| Contractor's Name |             |                     |      |                 |                        |                  |                           |            |              |
| Address           |             |                     |      |                 |                        |                  |                           |            |              |
| GST No.           |             |                     |      |                 |                        |                  |                           |            |              |
| State Code        |             |                     |      |                 |                        |                  |                           |            |              |
| PAN No.           |             |                     |      |                 |                        |                  |                           |            |              |
| To                |             |                     |      |                 |                        |                  |                           |            |              |
|                   |             |                     |      |                 |                        |                  |                           |            |              |
|                   |             |                     |      |                 |                        |                  |                           |            |              |
| Sl No.            | T. Item No. | Description of Item | Unit | Tender Quantity | Qty upto previous Bill | Qty in this Bill | Cumulative Total Quantity | Rate in Rs | Amount in Rs |
| (1)               | (2)         | (3)                 | (4)  | (5)             | (6)                    | (7)              | (8)=(6)+(7)               | (9)        | (10)         |
|                   |             |                     |      |                 |                        |                  |                           |            |              |
|                   |             |                     |      |                 |                        |                  |                           |            |              |
|                   |             |                     |      |                 |                        |                  |                           |            |              |
|                   |             |                     |      |                 |                        |                  |                           |            |              |

**LIST OF PRINCIPAL / APPROVED MAKES FOR CIVIL & INTERIOR WORKS**

| SL. No. | ITEM                                             | MAKES/AGENCIES/BRANDS                                                      |
|---------|--------------------------------------------------|----------------------------------------------------------------------------|
| 1.      | <b>GI PIPES</b>                                  | Jindal<br>Zenith<br>Apollo<br>GST<br>Prakash<br>QST                        |
| 2.      | <b>GI PIPES FITTINGS</b>                         | R-Brand<br>K.S. Brand<br>Zoloto<br>RR<br>SSS<br>NMC                        |
| 3.      | <b>COPPER PIPES /TUBES</b>                       | Rajco Metal Industries<br>B.P. Conex<br>Comap                              |
| 4.      | <b>MULTI LAYER COMPOSITE PIPES</b>               | Ki-TEC<br>Kisan<br>Flowguard CPVC Astral                                   |
| 5.      | <b>PVC PIPES AND FITTINGS</b>                    | Chemplast<br>Prince<br>Supreme<br>Finolex<br>Oriplast                      |
| 6.      | <b>UPVC (UNPLASTICIZED PIPES &amp; FITTINGS)</b> | Prince<br>Supreme<br>Paras                                                 |
| 7.      | <b>GATE VALVES, GLOBE VALVE</b>                  | Leader<br>Kirloskar<br>Zoloto<br>Orient                                    |
| 8       | <b>FOOT VALVES, CHECK VALVE</b>                  | Kirloskar<br>Leader<br>Ashoka                                              |
| 9       | <b>WATER METERS</b>                              | Capstan<br>Anandaasahi<br>Dasmesh<br>Remco                                 |
| 10      | <b>FERRULES</b>                                  | Leader<br>Hindco<br>Neta<br>Annapurna                                      |
| 11.     | <b>BIB COCKS,STOP COCKS,PILLAR TAPS</b>          | Jaguar (Continental Series)<br>Marc (Orient Series)<br>Essco<br>ARK<br>GEM |
| 12.     | <b>LOW LEVEL FLUSHING CISTERNS (PVC/CERAMIC)</b> | Parryware<br>Cera<br>Hindware<br>Commander                                 |

| SL. No. | ITEM                                                                        | MAKES/AGENCIES/BRANDS                                                                         |
|---------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 13.     | <b>VITREOUS SANITARY WARE<br/>LIKE WC, WASH<br/>BASIN, URINALS, EWC ETC</b> | Parryware<br>Cera<br>Hindware<br>Neycer                                                       |
| 14.     | <b>PLASTIC SEAT AND COVER</b>                                               | Commander<br>Parryware<br>Bestolite<br>Duroshine                                              |
| 15.     | <b>BATH ROOM FITTINGS</b>                                                   | Jaguar (Continental Series)<br>Essco<br>GEM<br>ARK<br>Marc (Oriental Series)                  |
| 16.     | <b>C.I. PIPES &amp; FITTINGS</b>                                            | Hind<br>BIS<br>BIC<br>Neco                                                                    |
| 17.     | <b>C.I. NAHANI TRAP</b>                                                     | BIC<br>SKF<br>NECO<br>RAJCO                                                                   |
| 18.     | <b>SW PIPES</b>                                                             | HIND<br>PERFECT<br>BURNS                                                                      |
| 19.     | <b>PVC CABINET MIRROR</b>                                                   | Commander                                                                                     |
| 20.     | <b>SLUICE VALVE</b>                                                         | Leader<br>Kirloskar                                                                           |
| 21.     | <b>HDPE/LDPE/LLDPE WATER<br/>STORAGE TANKS</b>                              | Sintex<br>Polycon<br>G & P                                                                    |
| 22.     | <b>CERAMIC / GLAZED TILES</b>                                               | Nitco<br>Somany<br>Kajaria<br>Euro<br>H.R. Johnson<br>Orient Bell Ltd                         |
| 23.     | <b>VITRIFIED TILES</b>                                                      | Nitco<br>Somany<br>Kajaria<br>RAK<br>EURO<br>Orient Bell Ltd<br>Asian Granito India Ltd( AGL) |

| SL. No. | ITEM                                                      | MAKES/AGENCIES/BRANDS                                                                                                                                 |
|---------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24.     | <b>PLY WOOD (BWR,BLOCK BOARD)</b>                         | Kitply<br>Archid<br>Green Ply<br>Century Ply<br>Bhutan Ply<br>Sharon<br>Anchor<br>Swastik<br>National<br>Samrat Plywood                               |
| 24A.    | <b>FIRE RETARDANT PLY WOOD AS PER IS 5509/Block Board</b> | Archid<br>Green Ply( Defender Brand)/Block Board<br>Century Ply                                                                                       |
| 25.     | <b>FLOAT GLASS</b>                                        | Saint Gobin<br>Modi Guard<br>Triveni Sheet Glass<br>Indo Asahi Glass Co.<br>Tata<br>Atul                                                              |
| 26.     | <b>PVC DOORS &amp; DOOR FRAMES</b>                        | Rajshri<br>Sintex<br>Supreme                                                                                                                          |
| 27.     | <b>ALUMINIUM EXTRUDED SECTIONS</b>                        | Hindal<br>Jindal<br>Indal<br>Hindalco                                                                                                                 |
| 28.     | <b>STAINLESS STEEL KITCHEN SINKS</b>                      | Nirali<br>Farnkee<br>Jayna<br>Diamond<br>Neelkanth                                                                                                    |
| 29.     | <b>PRELAMINATED/ VENEERED PARTICLE BOARD</b>              | Novopan<br>Green Lam<br>Kitlam<br>Archid Lam<br>Swastik                                                                                               |
| 30.     | <b>FLUSH DOOR SHUTTERS</b>                                | Kutty Flush Door<br>Century<br>Green Ply<br>Shiva Hari Plywood Ltd.(Corbett)<br>Anchor Ply<br>Swastik Ply<br>Western India<br>Parvathi Wood<br>Samrat |
| 31.     | <b>HIGH PRESSURED LAMINATES</b>                           | Green Lam<br>Merino<br>Sunmica/Formica<br>Century<br>Durian<br>Sundek<br>Anchor<br>Decolam , Samrat                                                   |

| SL. No. | ITEM                      | MAKES/AGENCIES/BRANDS                                                                                                      |
|---------|---------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 32.     | <b>FLOOR SPRINGS</b>      | Everite<br>Hardwyn<br>Efficient Gadgets<br>Garness<br>Dormer                                                               |
| 33.     | <b>VENEERS</b>            | Decowood<br>Euro Veneers<br>Durian<br>Green Lam                                                                            |
| 34      | <b>MDF BOARDS</b>         | Duratuff<br>Nuwood<br>Century<br>Novopan<br>Kitply<br>Green Ply                                                            |
| 35      | <b>ADHESIVE</b>           | Fevicol SH<br>Araldite<br>Ciba Giegy<br>Mowiool HV of Mafatlal                                                             |
| 36      | <b>WOOD PRESERVATIVES</b> | Bison<br>Godrej<br>Kot                                                                                                     |
| 37      | <b>HARDWARE FITTINGS</b>  | Jyoti<br>Argent<br>C.I.E.F.<br>Classic<br>Everite<br>Metaco India<br>JH Aluminium<br>PV Radhakrishna<br>Etalite<br>Hardwin |
| 38      | <b>DOOR CLOSER</b>        | Everite<br>Hardwyn<br>Efficient Gadgets<br>Ebco<br>Dorma<br>Garness                                                        |
| 39      | <b>DRAWER SLIDERS</b>     | Efficient Gadgets<br>Ebco<br>Etahoa<br>Sisco                                                                               |
| 40      | <b>LOCK</b>               | Godrej<br>Golden<br>Efficient Gadgets<br>Mark<br>Sheet<br>Vision<br>Dorma                                                  |

| SL. No. | ITEM                                              | MAKES/AGENCIES/BRANDS                                                                                                                                                      |
|---------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 41      | <b>MIRRORS</b>                                    | Atul<br>Sun<br>Commander<br>Modi Guard<br>Saint Gobin<br>Globe                                                                                                             |
| 42      | <b>WATER PROOFING COMPOUND</b>                    | Impermo<br>Cico<br>Pidliite<br>Roff<br>Choksey<br>Hindustan –Ciba Gaigey<br>Accoproof<br>Sika<br>Fosroc                                                                    |
| 43      | <b>STEEL WINDOWS AND VENTILATORS</b>              | Agew Steel Mfg. Co. Ltd.<br>Sen Harvic<br>Hopes<br>Diana Casement<br>Madhu Industries Bangalore<br>Multiwin Unique Metal Windows<br>Ankur Industries<br>Modern Fabricators |
| 44      | <b>AC PIPES/SHEETS</b>                            | Charminar<br>Everest<br>Visakha<br>Orient<br>Ramson                                                                                                                        |
| 45      | <b>SPECIAL PROTECTIVE &amp; DECORATIVE FINISH</b> | Snowcem Paint<br>Asian Paints<br>Berger<br>Jenson & Nicholson<br>Kansai Nerolac<br>ICI<br>Godawari                                                                         |
| 46      | <b>OIL BOUND DISTEMPER</b>                        | Asian<br>Berger<br>Jenson & Nicholson<br>ICI<br>Kansai Nerolac<br>Godawari                                                                                                 |
| 47      | <b>CEMENT PAINT</b>                               | Snowcem Plus<br>Berger<br>Asian Paints<br>Jenson & Nicholson<br>Kansai Nerolac<br>ICI<br>Godawari                                                                          |
| 48      | <b>SURFACE TEXTURE</b>                            | Heritage (Bakelite Hylam Ltd.)<br>Spectrum                                                                                                                                 |

| SL. No. | ITEM                                                                                       | MAKES/AGENCIES/BRANDS                                                                                |
|---------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 49      | <b>TEXTURE PAINT</b>                                                                       | Snowcem India Ltd. Santex Matt<br>Asian<br>Jenson & Nicholson<br>Berger<br>Kansai Nerolac            |
| 50      | <b>ENAMEL PAINT<br/>PRIMERS/READY MIXED PUTTY<br/>FOR WOOD WORK , IRON &amp;<br/>STEEL</b> | Asian<br>Berger<br>Jenson & Nicholson<br>Kansai Nerolac<br>ICI<br>MRF<br>Godawari                    |
| 51      | <b>WALL PUTTY</b>                                                                          | Birla wall Care<br>Snowcem paints<br>JK<br>Asian paints                                              |
| 52      | <b>EXTERIOR EMULSION</b>                                                                   | Asian Paints - Apex<br>Berger Paints<br>Kansai Nerolac<br>MRF<br>Jenson Nicholson<br>ICI<br>Godawari |
| 53      | <b>CEMENT CONCRETE PIPE</b>                                                                | The Indian Hume Pipe<br>Premier Pre-stressed Co.                                                     |
| 54      | <b>EXPANSION JOINT BOARD</b>                                                               | Shalimar Tar Products<br>Lloyds Insulations<br>Fosroc<br>Shalitex                                    |
| 55      | <b>FALSE CEILING</b>                                                                       | India Gypsum<br>Armstrong<br>Daikin<br>Insula<br>QED Panels                                          |
| 56      | <b>VERTICAL BLINDS</b>                                                                     | Vista Levlor<br>TRAC<br>MAC<br>Marvel                                                                |
| 57      | <b>ADHESIVE FOR TILE FIXING</b>                                                            | Roffe<br>Balendura<br>Cera Bond<br>Fosroc<br>Choskey Chemicals<br>Dr. Fixit<br>Sika<br>Sunanda       |

|                |                                          |                                                       |
|----------------|------------------------------------------|-------------------------------------------------------|
| 58             | <b>PAVING TILES</b>                      | Eurocon<br>Ultra<br>Duracrete                         |
| 59             | <b>PVC FLOORING</b>                      | Flora<br>Armstrong                                    |
| <b>SL. No.</b> | <b>ITEM</b>                              | <b>MAKES/AGENCIES/BRANDS</b>                          |
| 60             | <b>VINYL FLEXIBLE FLOORING</b>           | Wonder Floor<br>Armstrong<br>BHOR<br>Rikvin<br>Tusker |
| 61             | <b>FIBRE GLASS DOORS</b>                 | Master Craft                                          |
| 62             | <b>SS/CP FRICTION HINGES</b>             | Ebco<br>Jyoti<br>Everest<br>Magnum                    |
| 63             | <b>SOFT BOARD</b>                        | Jolly Board                                           |
| 64             | <b>SCREW</b>                             | Nettelefold<br>GKW                                    |
| 65             | <b>FIBRE REINFORCEMENT<br/>COMP.DOOR</b> | Loknath Unique                                        |

**SPECIAL CONDITIONS REGARDING INSPECTION OF WORK****1. INSPECTION OF WORK :**

All works in course of execution or after execution in pursuance of the Contract, shall at all times be open to the inspection and supervision of the Executive Director (Bldg.) or his authorized representatives and the Contractor or his responsible agent, duly accredited in writing, shall at all such times, be present to receive instructions/orders. The work during the progress or any time before settlement of the final bill is also liable to be inspected by Chief Technical Examiner of the Central Vigilance Commission, New Delhi, on behalf of the Employer and this shall be also considered as an inspection by the Employer for all purpose.

**2. PRECEDENCE FOR ACCEPTANCE :**

If any contradiction or variance is observed in different components of the tender's the details clearly given in -

- a) "General Preamble" shall have the precedence over the relevant details given in General "Specifications".
- b) "Trade Preambles" shall have the precedence over the relevant details given in "General Specifications"
- c) The description of an item of the "Schedule of Quantities" shall have the precedence over the relevant details given in "General preambles", General "Specification" and "Trade preambles".

## APPENDIX TO CONDITIONS OF CONTRACT

**NAME OF WORK: E- Tender for external/Internal Painting & miscellaneous works of B.O. at Rishikesh under D.O.-Dehradun.**

ESTIMATED COST : Rs.357270.50

PERIOD FOR COMPLETION : 30 days

EARNEST MONEY DEPOSIT : Rs. 7200/-

| Sl.No. | Clause Nos. | Description                                               | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------|-------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | 13          | Date of commencement                                      | Either 7 (Seven) days from the date of acceptance letter issued to the contractor<br>OR<br>The day on which contractor is instructed to take possession of the site, whichever is earlier.                                                                                                                                                                                                                                                                                                                                                                                           |
| 2      | 13&26       | Time Period                                               | 3monthsfromthethedateof commencement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3      | 19          | Compensation in the form of penalty for delay of the work | Quantum of compensation: 1.5% per month of delay to be computed on per day basis as mentioned in Clause no 19.1, not to exceed 10% of the tendered value of the work.                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4      | 21          | Period of final measurement                               | 60 (Sixty) days from the date of completion of contract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5      | 22          | Interim certificate                                       | 1,78,000/-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6      | 22          | Period of honoring interim certificate                    | 30 days                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7      | 22          | Period of honoring final certificate                      | 90 days from the date of submission of final bill with details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 8      | 27          | Defects Liability Period                                  | 12(Twelve) months after virtual completion of the work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 9      | 35          | Security Deposit                                          | <p><b><u>i) For works costing up to &amp; including Rs 200 lac :- 5% of accepted tender amount (Rounded off to next Hundred Rupees) as Security Deposit only.</u></b></p> <p>ii) For works costing more than Rs 200 lac up to &amp; including Rs 800 lac :- 2.5% of estimated amount as Security Deposit and in addition, 5% of accepted tender amount as Performance Guarantee.</p> <p>iii) For works costing more than Rs 800 lac :- The sum of Rs 20.00 lac plus 2.5% of estimated amount as Security Deposit and in addition 5% of accepted amount as Performance Guarantee.</p> |

| Sl.No. | Clause Nos.                                | Description                                                         | Remarks                                                                                                                                                                                                                                                                                                        |
|--------|--------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10     | 35                                         | Recovery of Security Deposit                                        | Security Deposit shall be recovered from Bill at 7.5% of Gross amount of bill till the sum along with sum already deposited as EMD equals the Total Security Deposit.                                                                                                                                          |
| 11     | 17.5                                       | Contractor's All Risk Policy inclusive of Third Party Liability     | Contractor's All Risk (CAR) Policy of full contract value with rider for Third Party Insurance for amount insured not less than 7.5 % of contract value.                                                                                                                                                       |
| 12     | 17.6                                       | Workman's Compensation Policy                                       | As per requirement of prevalent Laws. But the number of workers covered shall not be less than the numbers mentioned in Labour License.                                                                                                                                                                        |
| 13     |                                            | Default in renewal of insurance policies by contractor.             | Insurance Policies (Workmen's Compensation and 3rd party) if not extended on time. Engineering Accounts section shall proceed with extension of this Insurance policies and apart from financial expenses, LIC shall deduct penalty amounting to Rs.10,000/- for each extension of such policy                 |
| 14.    | 22.6                                       | No Claim Certificate                                                | To be given on Contractors letter head                                                                                                                                                                                                                                                                         |
| 15     | 32 of General Instructions To Contractors. | Taxes, Duties, Levies And Deduction At Source.                      | The rates quoted shall be including all statutory taxes / levies but excluding GST. The GST shall be paid separately along with bill payments as per applicable rate, rules & procedures when the invoice is raised & uploaded by the contractors on GST Portal & tax is paid to the credit of the Government. |
| 16.    | 11                                         | Engineer/Supervisor at site, Diploma Holder with 2 years experience | For not providing, recovery of Rs 20,000/- per month or part thereof.                                                                                                                                                                                                                                          |
|        |                                            |                                                                     |                                                                                                                                                                                                                                                                                                                |
| 17     |                                            | Applicability of MSME Provision on Work Contract                    | Work contract does not falls within the ambit of Public Procurement Policy-2012 and MSME act. Hence benefits under Public Procurement Policy for MSMEs shall not be extended against tender for "Works Contract".                                                                                              |

**Note: TAXES, DUTIES, LEVIES AND DEDUCTION AT SOURCE:**

- The contractor shall be responsible to pay all statutory taxes & levies imposed by the State and Central Government such as Income Tax, Labour Cess, and any other applicable taxes etc., and the rates quoted in the tender shall allow for the same.
- Liabilities towards GST for Contractor and Employer shall be in accordance with relevant provisions of the **Central Goods and Service Tax Act 2017** or any amendment issued by concerned Authority from time to time.
- Rates are inclusive of all the taxes & levies such as Income Tax & Labour Cess etc. but excluding GST. The payment of GST shall be made separately in part or full to contractor / concerned authority as per the rates, rules & procedure prevailing at the time of bills payment.
- Payment of GST to contractors can be made along with the bills payments after the invoice is raised & uploaded by the contractors on the GST portal & tax is paid to the credit of Government.
- All the participating bidders must have valid GST Registration Certificate of Particular state/ Union Territory at the time of submission of bid. In the eventuality of not having valid GST registration Certificate with the State / Union Territory, where Implementing works Contract, the successful bidder will be required to obtain GST Registration Certificate of that Particular State / Union Territory where the Works Contract will be implemented within a period of 21 days from the date of issuance of Letter of Acceptance, failing which the letter of Acceptance will be withdrawn and cancelled. Earnest Money deposit will also be forfeited. No extension of time period will be given whatsoever unless there remain unforeseen impediments with the issuing Authority of such GST Registration.
- All the bidders are required to submit a copy of the GST Registration number provided by the relevant authority.
- Deduction at source of Income tax and Labour Cess etc. shall be made by LIC of India as per the provisions prevailing from time to time from the Running Account or Final Bills and remitted to the concerned Taxation Authorities/ State Government on behalf of the contractor.
- **The clauses given above will supersede all the provisions given in the tender elsewhere regarding any taxes /levies and GST.**

**NO CLAIM CERTIFICATE CUM RECEIPT**

(To be given on Contractor's letterhead)

"Received Rupees \_\_\_\_\_ (Rupees \_\_\_\_\_)  
being the amount against my/our final bill dated \_\_\_\_\_ for \_\_\_\_\_ (Name of Work) in full  
and final settlement of bill.

Contractor

(Signature of Contractor on Revenue stamp)

Rubber stamp/seal of the contractor /company

**APPENDIX TO GENERAL INSTRUCTION TO CONTRACTOR**

| Sl.NO | Clause Nos. | Description                                                                          | Remarks                                |
|-------|-------------|--------------------------------------------------------------------------------------|----------------------------------------|
| 1.    | 12          | Recovery of Electricity charges from Contractors bill <b>if used from LIC source</b> | 0.25% of the Gross value of work done. |
| 2.    | 13          | Recovery of Water charges from Contractors bill <b>if used from LIC source</b>       | 0.25% of the Gross value of work done. |

In terms of provision of section 33(4) of The insurance law (Amendment) ordinance ,2014 Insurance Regulatory and Development Authority of India (IRDA) ,If It consider expedient to do so may direct any person hereinafter referred to as "Investigation officer " ,to make an investigation as specified under sec 33(1) or carry out an inspection as specified under section 33(2) of The insurance laws (Amendment) Ordinance 2014 who may examine on both any Manager ,Managing Director or other officer of the service provider or contractor where the services are outsourced by LIC OF India

**FORFEITURE OF EARNEST MONEY DEPOSIT.**

1) If the lowest tender withdraws his tender before the expiry of validity period or before the issue of letter of acceptance whichever is earlier or makes any modification in the terms and conditions of tender which are not acceptable to department, then the department shall, without prejudice to any other right or remedy be at liberty to **forfeit 25% of the earnest money and to refund the balance.**

2) In case of forfeiture of earnest money as prescribed above, the tenderer shall not be allowed to participate in the tendering process of the work.

**LIFE INSURANCE CORPORATION OF INDIA  
D.O. Dehradun**

**NAME OF WORK: - E-Tender for external/internal Painting & miscellaneous works of  
.B.O. at Rishikesh under D.O.-Dehradun.**

**AMENDMENT TO CONDITIONS OF CONTRACT**

The following amendments are made to Conditions of Contract. These amendments will supersede all the provisions given elsewhere in the tender document.

- i) The clause no. 15.3 (h) The quantities for various items in BOQ may vary up to any extent and all extent of quantities including variation shall be paid at quoted tender rate only.
- ii) The clause no. -23 on page no.-33 , 37 (37.1 to 37.9) at page no.41 and 42 for LUMP SUM ADVANCE also stands deleted.

**Seal & Signature of Contractor**

**Sr.Divsional Manager**

**Annexure-„A“****LETTER OF AUTHORIZATION TO BID( On Non-Judicial Stamp Paper of Rs. 100/-)**

To,  
The Sr. Divisional Manager ,  
LIC of India,  
Nehru colony ,  
D.O.- Dehradun.

Date:

Dear Sir,

**Ref:- TENDER NO. LIC/DDN/Engg/LT-08/2021-22.**

This has reference to your above e-tender for external/internal Painting & miscellaneous works of B.O. at Rishikesh under D.O.-Dehradun.

We confirm that the person so authorized above has digital signatures and confirm that all the prices quoted in On-Line bid by him shall be binding on us.

He is also authorized to take decision on behalf of the company till tender process is completed.

The specimen signature is attested below

Specimen Signature of the Representative

**Signature of Authorizing Authority**

2. The details of Digital signatures are as below:

| S. No. | Name of the person | Digitally Signature Number | Valid up-to |
|--------|--------------------|----------------------------|-------------|
| 1      |                    |                            |             |

**Signature of Authorizing Authority**

## ANNEXURE – 'B'

## LIFE INSURANCE CORPORATION OF INDIA

(Refer Clause No. 35 of Conditions of Contract)

**FORM OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT**  
**IN INDIVIDUAL CONTRACTS**

To

THE LIFE INSURANCE CORPORATION OF INDIA

In consideration of the Life Insurance Corporation of India having its \_\_\_\_\_ Zonal Office at \_\_\_\_\_ in the State of \_\_\_\_\_ (hereinafter called „**the Corporation**“ which expression shall unless repugnant to the subject or context include its successors and assignees) having agreed under terms and conditions of contract (vide its acceptance letter No. \_\_\_\_\_ dated \_\_\_\_\_ ) made between

\_\_\_\_\_ (hereinafter called the said Contractor) and the Corporation in connection with \_\_\_\_\_ (hereinafter called „**the said contract**“) to accept a Deed of Guarantee and Indemnity as herein provided for Rs. \_\_\_\_\_ from the

\_\_\_\_\_ in lieu of the Security Deposit to be made by the contractor and/or in lieu of the deduction to be made from the Contractor's bills, for the due fulfillment by the said contractor of the terms and conditions contained in the said contract, we the \_\_\_\_\_ (hereinafter referred to as „**the said Bank**“) and having our office at \_\_\_\_\_ do hereby undertake and agree to indemnify and keep indemnified the Corporation from time to time to the extent of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) against any loss or damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by the Corporation by reason of any breach or breaches by the said contractor in respect of the said contract or of any of the terms and conditions contained in the said contract, or in respect of all its claims for money and / or material found due and recoverable from the said contractor and to unconditionally pay the amount claimed as such by the Corporation on demand and without demur to the extent aforesaid.

2. We, the said Bank further agree that the Corporation shall be the sole judge of and as to whether the said contractor has committed any breach or breaches of any of the terms and conditions of the said contract and the extent of loss, damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by the Corporation from time to time on account thereof and the decision of the Corporation in this respect shall be final and binding on us.

3. The Corporation shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee or Indemnity from time to time to vary any of the terms and conditions of the said contract or to extend time of performance by the said contractor, or to postpone for any time and from time to time any of the powers exercisable by it against the said contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said Contract or securities available to the Corporation and the said Bank shall not be released from its liability under these presents by any exercise by the Corporation of the liberty with reference to the matters aforesaid or by reason of time being given to the said contractor or any other forbearance, act or omission on the part of the Corporation or any indulgence by the Corporation to the said contractor or of any other matter or thing whatsoever, which under the law-relating to sureties would but for this provision have the effect of so releasing the Bank from its liability.

4. It shall not be necessary for the Corporation to proceed against the contractor before proceeding against the Bank and the Guarantee and Indemnity herein contained shall be enforceable against the said Bank, notwithstanding any security which the corporation may have obtained or obtain from the contractor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.

5. Notwithstanding anything contained in any of the foregoing clauses the liability of the Bank under this Guarantee shall not exceed Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only). The guarantee shall remain in force till \_\_\_\_\_. If any extension of time be granted to the contractor, we undertake to extend the guarantee with the consent of the contractor. Unless a claim or demand under this guarantee is made or presented to the Bank within six months from the expiry date, all the rights of the Corporation under this Guarantee shall cease and the Bank shall be released and discharged from all liability hereunder.

6. We, the said bank lastly undertake not to revoke this guarantee and indemnity during its currency except with the previous consent of the Corporation in writing and agree that any change in the constitution of the said contractor or the said Bank shall not discharge our liability hereunder.

For and on behalf of the Bank

(Name and Designation)

The above Guarantee is accepted by the  
LIFE INSURANCE CORPORATION OF INDIA.

For and on behalf of the LIC of India

(Name and Designation)

Dated:

**Note No.1 \* : FILL IN AS APPLICABLE**

**A) For Proprietary concerns:-**

Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_ carrying on business under the name and style of \_\_\_\_\_ at \_\_\_\_\_

(hereinafter called „**the said contractor**“ which expression shall unless the context requires otherwise include his heirs, executors, administrators and legal representative).

**OR**

**B) For Partnership concerns:-**

1. Shri \_\_\_\_\_  
son of \_\_\_\_\_  
resident of \_\_\_\_\_

2. Shri \_\_\_\_\_  
son of \_\_\_\_\_  
resident of \_\_\_\_\_

\_\_\_\_\_ carrying on business in partnership under the name and style of \_\_\_\_\_ of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter collectively called „**the contractor**“ which expression shall unless the context requires otherwise include each of them and their respective heirs, executors, administrators and legal representatives)

**OR**

**C) For companies :-**

M/S / Shri \_\_\_\_\_ a company under the Companies Act 1956 and having its registered office at \_\_\_\_\_ in the state of \_\_\_\_\_ (hereinafter called „**the said contractor**“ which expression shall unless the context requires otherwise include its successors and assignees).

**Note No.2:**

**\*\* Please fill in the name and address of Bank.**

**BANK GUARANTEE IN LIEU OF EARNEST MONEY (On  
Non-judicial Stamp Paper of appropriate value)**

To,  
The Life Insurance Corporation of India  
North Central Zonal Office,  
Engineering Department,  
1st Floor, Jeevan Vikas,  
16/275, Mall Road, Kanpur

In consideration of the Life Insurance Corporation of India a body Corporate constituted and established by Life Insurance Corporation Act, 1956 (Act 31 of 1956) and having its Central Office at "Yogakshema", Jeevan Bima Marg, Mumbai and its North Central Zonal Office at Kanpur in the State of UP (hereinafter called "The Corporation" which expression shall include its successors and assignees wherever context or meaning shall so require or permit) published a tender for the work having name and title.....

.....  
(hereinafter called "The Tender" which expression shall include any amendment, alteration to "The Tender" issued by "The Corporation").

M/S..... a partnership firm / sole proprietor / a company registered under the company act, 1956 having its office at ..... (here in after called "The Tenderer" which expression shall include its executors, administrators and assigns) having participated against "The Tender" for Construction / Execution of works for "The Corporation" and "The Corporation" having agreed to accept the payment of Earnest Money amounting to Rs.....  
(Rupees.....)

.....Only) in form of an unconditional and irrevocable Bank Guarantee for the fulfillment of laid down condition of "The Tender",

1. We,.....Bank having office at ..... (herein after referred to as "The Bank" which expression shall include its successors and assigns) at the request and on behalf of "The Tenderer" do hereby guarantee and undertake to pay " The Corporation " immediately on demand any or all money to the extent of Rs..... (Rupees..... only ) as aforesaid at any time upto ..... ( date) without any demur , reservation , contest, recourse or protest and / or without any reference to "The Tenderer". Any such demand made by "The Corporation" on "The Bank" shall be conclusive and binding notwithstanding any difference between " The Corporation" and " The Tenderer " or any dispute pending before any Court, Tribunal, Arbitrator or any other authority.

2. We .....("The Bank") agree that the guarantee herein contained shall be irrevocable and shall continue to be enforceable till "The Corporation" discharges this guarantee.

3. We, ..... Bank further agree that the amount demanded by "The Corporation" as such shall be final and binding on "The Bank" as to "The Bank" 's liability to pay and the amount demanded and "The Bank" to undertake to pay "The Corporation" the amount so demanded on first demand and without any demur notwithstanding any dispute raised by "The Tenderer" or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.

4. We, ..... Bank further agree with "The Corporation" that "The Corporation" shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of "The Tender"/ or to extend time of performance by "The Tenderer" from time to time or to postpone for any time to time any of the powers exercisable by "The Corporation" against "The Tenderer" and to forbear to enforce any of the terms and conditions relating to "The Tender" and we shall not be relived from our liability by reason of any such variation or extension being granted to "The Tenderer" or for any forbearance, act or omission on the part of "The Corporation" or any indulgence by "The Corporation" to "The Tenderer" or by any such matter or things whatsoever which under the law relating to sureties would but for this provision have the effect of reliving us.

5. NOTWITHSTANDING anything hereinbefore contained, our liability under this Guarantee is restricted to Rs..... ( Rupees.....Only). Our liability under this guarantee shall remain in force until expiration of **Six (6) months** from the due date of opening of "The Tender". Unless a demand or claim under this guarantee is made on us in writing within said period, that is, on or before ..... all rights of "The Corporation" under the said guarantee shall be forfeited and we shall be relived and discharged from all liabilities there under.

6. We, ..... Bank further undertake not to revoke this guarantee during its currency except with the previous consent of "The Corporation" in writing.

7. We, ..... Bank lastly agree that "The Bank" 's liability under this guarantee shall not be affected by any change in the constitution of "The Tenderer".

8. "The Bank" has power to issue this guarantee in favour of "The Corporation" in terms of the documents and/or the Agreement / Contract or MOU entered into between "The Tenderer " and "The Bank" in this regard.

IN WITNESS WHEREOF "The Bank" has executed this document on this ..... day of .....

For .....Bank  
(by its constituted attorney)  
(Signature of a person authorised to sign on behalf of "The Bank")