



**FOR EXTERNAL CIVIL REPAIR WORKS FOR BELL'S HOUSE
AT CAMAC STREET, KOLKATA-700016**

TENDER REFERENCE NO : 02/17-18/CB/PECOKOL/BH/REP

COST OF TENDER DOCUMENTS: Rs 1,000/-

DATE OF ISSUE OF TENDER: 25/05/2017(THURSDAY)

PREBID MEETING: 06/06/2017(TUESDAY) at 15.30

LAST DATE FOR SUBMISSION OF TENDER: 09/06/2017(FRIDAY) UPTO 1.00 PM

DATE OF OPENING OF TECHNICAL BID: 09/06/2017(FRIDAY) AT 3.30 PM

DATE OF OPENING COMMERCIAL/PRICE BID: 14/06/2017(WEDNESDAY) TENTATIVELY

EMD:40000/-(FOURTY thousand only)

INDEX

S No	Description	Page No
	Part A – TECHNICAL BID	
1	BID DETAILS	3
2	PURPOSE OF TENDER	4
3	ELIGIBILITY CRITERIA	4-5
4	NOTICE INVITING TENDER	6
5	LETTER SUBMITTING TENDER	7
6	APPENDIX TO FORM OF TENDER	8
7	BIDDERS INFORMATION	9
8	ARTICLES OF AGREEMENT	10-11
9	GENERAL CONDITIONS OF CONTRACT	12-35
10	INSTRUCTIONS TO BIDDERS	36-37
11	BIDDER'S INFORMATION	38
12	REFERENCE LIST	39
13	COMPLIANCE STATEMENT	40
14	SPECIAL CONDITIONS OF CONTRACT	41-47
15	INTEGRITY PACT	48-55
16	BRAND OF MATERIAL	56
17	TECHNICAL SPECIFICATIONS	57-73
18	LIST OF ANNEXURES	ADDITIONAL
	Part B – COMMERCIAL BID	
18	Commercial / Price Bid	
19	DRAWINGS	

1. BID DETAILS

1.	Tender Reference	NIT/ CANARA-CO / EXT. REPAIR WORKS / 01-2017/1
2.	Date of commencement of Tender download	25.05.2017 from 12.00hrs
3.	Last date of acceptance of Queries/ Prebid meeting	06.06.2017 at 15.30 hrs
4.	Last date and time for downloading tender	05.06.2017 upto 17.00 hrs
5.	Last date and time for submission of tender	09.06.2017 upto 13.00 hrs
6.	EMD & Technical Bid opening	09.06.2017 at 15.30 hrs
7	Date of opening commercial/financial bid(tentative).	14.06.2017 at 15.30 hrs
8.	Cost of Tender Document (CTD)	Rs. 1,000/- (non refundable in the form of Demand Draft favouring Canara Bank payable at Kolkata , to be submitted at the time of submission of tender. CTD to be clearly written on the top of the envelope.
10.	Earnest Money Deposit (EMD) Amount	Rs. 40,000/- (Rs. Forty thousand only) in the form of Demand Draft in favouring Canara Bank payable at Kolkata .EMD should be submitted along with Technical Bid. EMD to be clearly written on top of the envelope. Tenders without EMD will be summarily rejected.
11.	Estimated Cost of Project	Rs 70,00,000.00 lacs (Rs.Seventy lacs only)
12.	Place of opening of Bids	Canara Bank, Circle Office,Kolkata Bell's House,5th floor Camac Street,Kolkata-700017)
13.	Contact Details	Divisional Manager Circle Office,Kolkata Bell's House,2ND floor Camac Street,Kolkata-700017)

Note: - Technical bids will be opened in the presence of bidders who choose to attend as above. The above schedule is subject to change. Notice of any changes will be published on Bank's website (www.canarabank.com) only wherever feasible.. **All bidders should have valid e-mail id.**

Technical Bid and Commercial Bid to be submitted separately in a single sealed envelope . In the technical bid envelope **CTD** draft and **EMD** draft to be placed along with other documents as asked for. Both the envelopes to be written as " TECHNICAL BID FOR THE PROPOSED EXTERNAL REPAIR WORKS OF CIRCLE OFFICE, KOLKATA FOR CANARA BANK " and "COMMERCIAL BID FOR THE PROPOSED EXTERNAL REPAIR WORKS OF CIRCLE OFFICE,KOLKATA FOR CANARA BANK "

2. PURPOSE OF TENDER

Circle Office Authority of CANARA BANK , Kolkata intends to take up External Repair work of Bell's House as per details given in schedule of quantities / tender documents.

3. ELIGIBILITY CRITERIA

1. The Bidder should possess the requisite experience, resources and capabilities in providing the services necessary to meet the requirements, as described herein. The Bidder should also possess the technical know-how and the financial capacity that would be required to complete the scope of work. The Bid must be complete in all respects and should cover the entire scope of work as stipulated in the tender document. Bidders not meeting the Eligibility Criteria will not be considered for further evaluation and bid submitted by them shall be summarily rejected.
2. This invitation of bids is open to all experienced contractors, reputed firms (proprietary/partnership), company / organization registered in India under Companies Act, provided they fulfill the minimum eligibility criteria as below. Consortium/Joint Ventures and Special Purpose Vehicles are not eligible for the tender and the bid, if any, submitted by them shall be summarily rejected. Proposals not complying with minimum eligibility criteria, as enumerated below, will be rejected and will not be considered for evaluation of technical bid. The proposal should adhere to the following minimum eligibility criteria:

S. No	Minimum Eligibility Criteria
1	<p>The Bidder should have satisfactorily completed similar works during last 5 (five) years ending last day of the month of March 2017 with Nationalised Banks/Govt. Sector/PSU should be either of the following :-</p> <ol style="list-style-type: none">1. One similar nature work amounting to Rs 60.00 Lacs Or2. Two similar nature work amounting to Rs 30.00 Lacs Or3. Three similar nature work amounting to Rs 20.00 Lacs <p>Similar work means External Civil Repairing work executed under one agreement only for Nationalised banks/Govt. Sector/PSU. Cumulative works executed under rate contract shall not be treated as one work. Components of work executed other than those included in definition of similar shall be deducted while calculating cost of similar work. Bidder shall submit abstract of cost of work in support of this.</p>
2	<p>The minimum average annual turnover of Bidder for the last three financial</p>
	<p>years i.e. 2013-14, 2014-15, 2015-16** must not be less than 40.00 lacs. Bidder to submit audited Balance sheet, Profit & Loss statement and trading account details for these financial years, if applicable.</p>
3	<p>The bidder should not have been black-listed / barred by any Public Sector Bank, RBI or IBA or any other Government / PSU agencies. An undertaking in this regard is to be submitted to Bank by Bidder.</p>

** In case, the company / bidder does not have the audited Balance Sheet for period ending March 2016, provisional balance sheet certified by their Statutory Auditors will be acceptable.

Note: The bidder must submit the Compliance Statement failing which the bids may not be taken for further evaluation.

3. Bidder must submit documentary evidence in respect of all above mentioned criteria while submitting the proposal. Proposal of bidder who do not fulfill the above criteria or who fail to submit documentary evidence thereon would be rejected.
4. The Bank reserves the right to request for any additional information and also reserves the right to reject or accept the bid of a bidder, if in the opinion of Bank the qualification data is incomplete or the bidder is found not qualified to satisfactorily execute the requirements of the project and no communication shall be entertained in this regard in future.
5. To become eligible for submission the bidder shall have to furnish an affidavit as under :

" I / We undertake and confirm that eligible similar work(s) has / have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of the Bank, then I / We shall be debarred for bidding in CANARA BANK in future for ever. Also, if such violation comes to the notice of the Bank before date of start of work, the Bank shall be at liberty to forfeit the entire amount of Earnest Money Deposit / Performance Guarantee." & cancel the work order.

6. List of Annexures to be duly filled and submitted along with technical bid:

A) ANNEXURE I

B) ANNEXURE II

C) ANNEXURE IV

D) ANNEXURE VI

4. NOTICE INVITING TENDER

1. Tenders are invited on item rate basis on behalf of CANARA BANK from experienced contractors, reputed firms (proprietary / partnership) / company / organization registered in India under Companies Act, who fulfill the eligibility criteria mentioned in the tender documents for
**EXTERNAL CIVIL REPAIR WORKS FOR BELL'S HOUSE AT
21 CAMAC STREET, KOLKATA-16**
against Payment of Rs. 1000/- (non refundable towards cost of tender), in two envelope system containing (1) Technical Bid (2) Commercial Bid. Tender purchase fee of Rs. 1000/- may be submitted in the form of demand draft in a separate envelope with EMD.
2. The Tender Documents containing detailed terms & conditions can be downloaded directly from the web site www.canarabank.com as per tender schedule attached.
3. All the bidders are required to submit Demand Draft in favour of Canara Bank, Kolkata of Rs. 1000/- towards the cost of tender document.
4. Bidders may submit their queries regarding any technical clarification from the Architectural Consultant **upto 06.06.2017 at 15.30 hrs.** No queries shall be entertained after last date fixed for acceptance of queries.
5. Based on the clarification of conditions by the Bank, the intending bidder will submit their unconditional acceptance on the prescribed format along with tender document.
6. Price bid of only those bidders shall be opened who bring their tender in line with requirements of tender documents and are acceptable to the Bank and the bidder who do not submit the EMD in the form of Bank draft, their tenders will be summarily rejected.
7. The price bid of technically eligible bidder who meets the eligibility criteria stipulated in tender documents will be opened in the presence of participated or representatives of participated bidders as per the schedule attached.
8. The Tenders shall be valid for a period of not less than 120 days after the opening of price bid / commercial bid.
9. All disputes arising out of or in connection with this agreement shall deem to have arisen in Kolkata and only the Kolkata High court shall have the jurisdiction to determine the same.
10. The Bank reserves the right to accept / reject any or all the offers submitted in response to this advertisement without assigning any reason whatsoever.
11. The Bank will not be bound to accept the lowest tender and reserves the right to accept or reject any or all the tenders without assigning any reasons whatsoever.
12. It shall be mandatory to sign the integrity pact & indemnity bond by the final accepted bidder failing which bidder will stand disqualified for tendering process and their bid shall be rejected summarily.

CIRCLE HEAD

5. LETTER SUBMITTING TENDER

To
THE CIRCLE HEAD
Circle Office, Kolkata
Bell's House
Camac Street,Kolkata-700017)

**Reg: EXTERNAL CIVIL REPAIR WORKS FOR BELL'S HOUSE AT
CAMAC STREET, KOLKATA**

Dear Sir,

1. Having visited the site and examined the drawings, conditions of contract, special conditions of contract, general specifications and detailed specifications, schedules and bill of quantities for the execution of the above named works, we offer to complete and maintain the whole of the said works in conformity with the said drawings, conditions of contract, specifications, schedules and bill of quantities for the sum stated in bill of quantities of this Tender Document or such other sum as may be ascertained in accordance with the said conditions of contract.
2. We undertake to complete and deliver the whole of the works comprised in the contract within the time stated in the appendix hereto.
3. We have independently considered the amount of liquidated damages shown in the Appendix to form of tender hereto and agree that it represents a fair estimate of the loss likely to be suffered, by you in the event of the works not being completed in time.
4. We agree to abide by this tender for the period of 120 days from opening of Price Bid/Commercial Bid or extension there of as required by the Bank from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiry of that period.
5. We confirm that the period and rates as referred in the agreement or general conditions of contract are given or summarized in the appendix hereto, to which we give our consent and agree to abide by the same.
6. We understand that if our tender is accepted, we are to be jointly and severally responsible for the due performance of the contract.
7. We understand that you are not bound to accept the lowest or any tender you may receive and may reject all or any tender, accept or entrust the entire work to the Contractor without assigning any reason or giving any explanation whatsoever.
8. I/we have deposited Earnest Money `Rs.40,000/- by demand draft which amount is not to bear any interest. I/we do hereby agree that this sum shall be forfeited by you in the event our tender is accepted and I/we fail to execute the contract when called upon to do so.
Dated this day of2017.

Signature of
authorized to sign in the capacity of
duly tenders for and on behalf of
(IN CAPITALS)

Tender submitted on 09th June,2017

6. APPENDIX TO FORM OF TENDER

1	Defects Liability period	12 Months
2	Date of Commencement	Date of start of work shall be reckoned from the date of acceptance of award letter or 14 th day of issue of award letter or handing over of site whichever is earlier.
3	Time of completion	60 days from the date of commencement of work.
4	Period of Final Measurements	1 (One) month from the Date of Virtual Completion (Clause No.34 of GCC)
5	Liquidated Damages	1.0% of the contract amount shown in the tender per week subject to the ceiling of 10.0% of the accepted contracted sum subject to maximum up to total Security Deposit (Initial plus Retention) (Clause No.16.4 of GCC)
6	Minimum Value of work for Interim Certificate	25 Lacs (This value shall be difference of work done of consecutive bills).
7	Initial Security Deposit	2% of the accepted value of the tender including the Earnest Money, maximum upto Rs 1.40 lacs. (Clause No.14 of GCC)
8	Retention Percentage on every Running bill adjusted with EMD & Initial security deposit	10% of the accepted tender amount subject to maximum as given in. (Clause No.14 of GCC)
9	Refund of total Security Deposit	The Retention amount will be refunded to the Contractor within 14 days after end of the defect liability period (Clause No.14 of GCC)
10	Period of Honoring Certificate	15 days from date of receipt of certificate from the Architect / Engineer

ARTICLES OF AGREEMENT

This agreement is made at Kolkata on..... day of 2017 between Canara Bank, a body corporate constituted under the Banking Companies (Acquisition and transfer of Undertaking Act) 1970 having its Head office at 112, J.C Road, Bangalore – 560002 and its General Administration Division (Hereinafter referred to as “The Bank/The Employer ") of the one part & (Herein after called "the Contractor") of the other part.

WHEREAS the Employer is desirous of certain works being executed viz

EXTERNAL CIVIL REPAIR WORKS FOR BELL'S HOUSE AT CAMAC STREET, KOLKATA

and has by letter of acceptance dated.....accepted a tender by the Contractor for the execution, completion, and maintenance of such works, now THIS AGREEMENT WITNESSES AS FOLLOWS :

1. In this agreement words and expressions shall have the same meaning as are respectively assigned to them in the said conditions of contract hereinafter referred to.
2. The following documents and the terms and conditions contained therein shall form and construe as integral part and parcel of this agreement viz.
 - a. Original tender document.
 - b. Relevant correspondence all letter/ correspondence forming parts of contract and referred to in acceptance letter.
 - c. Acceptance letter
 - d. Bill of quantities
 - e. Other additional documents as required g.
 - f. Articles of Agreement.
3. The aforesaid documents shall be taken as complementary and mutually explanatory of one another, but in the case of ambiguities of discrepancies the latest documents/clarification issued by the Bank shall prevail over the earlier documents.
4. In consideration of payment to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to perform execute, complete and maintain the work in conformity in all respects with the provision of the contract.
5. The Employer hereby covenants to pay the Contractor in consideration of the execution, completion and maintenance of the work such sums as shall become payable hereunder at the time(s) and in the manner prescribed in the said conditions and price schedule of quantities / bill of quantities prescribed in the contract.
6. All disputes arising out of or in connection with this agreement shall deemed to have arisen in Kolkata and only Kolkata High Court shall have the jurisdiction to determine the same.
7. IN WITNESS whereof the parties hereto have caused their respective common seals to be hereunto affixed (or have hereunto set their respective hands and seals) the day, month and year first above written.

SIGNED AND SEALED AND DELIVERED BY THE

Said

Said

(Name)

(Name)

on behalf of the Contractor

on behalf of the Employer

In the presence of

In the presence of

Name:

Name

Address:

Address:

This form is included in the tender documents only for the information of the bidders. (Only the successful bidder will be in due course, required to complete the form.)

GENERAL CONDITIONS OF CONTRACT (GCC)

Except where provided for in the description of the individual items in the Schedule of quantities and in the specification and conditions laid down herein after and in the drawings, the work shall be carried as per standard specifications and under the directions of the Employer.

1. INTERPRETATION

In construing these conditions, the specifications, the schedule of quantities, tender and agreement, the following words shall have the meaning herein assigned to them except where the subject of context otherwise requires :

- i. Employer: The term employer shall denote Canara Bank with their Head Office at 112, J.C Road, Bangalore-560002, and any of its employees or representative authorized to act on their behalf.
- ii. The Bank: The term Bank shall mean Canara Bank, the Employer.
- iii. The Architect / Engineer in charge: The term means Architect / Engineer of the Bank deployed to look after the work.
- iv. Contractor: The term Contractor shall mean M/s (name and address of the Contractor) and his/their heirs, legal representatives assigns and successors.
- v. Site: The site shall mean the site where the works are to be executed as shown within boundary on the Site Plan including any building and erections thereon allotted by the employer for the Contractor's use.
- vi. Site Engineer: The Site Engineer shall be appointed by the Bank. The Bank may also determine the number of Site Engineers and the supporting staff at site office- to assist them and also whether the Site Engineer shall be temporary or permanent. As far as possible, the Site Engineer should assume charge of his post before-the contractor reports onsite of work. Where more than one Site Engineer is appointed, one of them shall be designated as Senior Site Engineer by the Premises Department and the other Site Engineer shall be reporting to the Senior Site Engineer.
- vii. Specifications and Drawings: The work is to be carried out in accordance with drawings, specifications, the schedule of quantities and any further drawings, which may be supplied, or any other instruction, which may be given by the employer during the execution of the work.
- viii. Drawings relating to work given to the Contractor together with a copy of schedule of quantities are to be kept at site and Employer shall be given access to such drawings or schedule of quantities whenever necessary.

In case any detailed drawings are necessary, Contractor shall prepare such detailed drawings and/or dimensional sketches therefore and have it confirmed by the employer prior to taking up such work.
- ix. The Contractor shall ask in writing for all clarifications on matters occurring anywhere in drawings, specifications and schedule of quantities or to additional instructions at least 10

days ahead from the time when it is required for implementations so that the Employer may be able to give decision thereon.

- x. "The Work" shall mean the work or works to be executed or done under this contract.
- xi. "Act of Insolvency" shall mean any act as such as defined by the Presidency Towns Insolvency Act or Provincial Insolvency Act or any Amending Statutes.
- xii. "The Schedule Of Quantities" shall mean the schedule of quantities as specified and forming part of this contract.
- xiii. Order of precedence for any ambiguity in the schedule of quantities, general conditions, special conditions, specifications and drawings for the Contractor shall be as per the decision of the Employer and the same will be binding on the Contractor, and shall be read as under in the decreasing order of importance.
 - a) Schedule of Quantities.
 - b) Drawings.
 - c) Special Conditions
 - d) General Conditions.
 - e) Standard (Technical) Specifications of Contract.
 - f) C.P.W.D specifications.
 - g) Bureau of Indian Standards specifications.
 - h) State P.W.D./General Engineering Practice.

Any ambiguity observed shall be brought to the notice of Employer and be executed after obtaining approval from the Employer. In case of any ambiguity between the above, the most stringent will follow.

2. SCOPE OF WORK

The work consists of **EXTERNAL CIVIL REPAIR WORKS FOR BELL'S HOUSE AT 21 CAMAC STREET, KOLKATA-16**

in accordance with the "Schedule of Specifications and Quantities". It includes repair works with all materials, labour, tools and equipment and management necessary for and incidental to the renovation and-completion of the work. All work, during its progress and upon completion, shall conform to the lines, elevations and grades as shown on the drawings furnished by the Employer. Should any detail essential for efficient completion of the work be omitted from the drawings and specifications it shall be the responsibility of the contractor to inform the Employer and to furnish and install such detail with Employer's concurrence, so that upon completion of the proposed work the same will be acceptable and ready for use.

Employer or his representative may in their absolute discretion issue further drawings and/or written instructions, details, directions and explanations, which are, hereafter collectively referred to as "The Employer's instructions" in regard to :

- a) The variation or modification of the design quality or quantity of works or the addition or omission or substitution of any work.
- b) Any discrepancy in the drawings or between the schedule of quantities and/or drawings and/or specification.
- c) The removal from the site of any defective material brought thereon by the contractor and the substitution of any other material thereof.
- d) The demolition removal and/or re-execution .of any work executed by the contractors.
- e) The dismissal from the work of any persons employed there upon.
- f) The opening up for inspection of any work covered up.

- g) The rectification and making good of any defects under clauses hereinafter mentioned and those arising during the maintenance period (retention period).

The contractor shall forthwith comply with and duly execute any work comprised in such Employer's or his representative's instructions, provided always that verbal instructions, Directions and explanations given to the contractor's or his representative upon the works by the Employer or his representative shall, if involving a variation, be confirmed in writing to the contractor/s within seven days. No works for which rates are not specifically mentioned in the priced schedule of quantities shall be taken up without written permission of the Employer or his representatives. Rates of items not mentioned in the priced schedule of quantities shall be fixed by the employer as provided in Clause "variation".

Regarding all factory made products for which ISI marked products are available, only products bearing ISI marking shall be used in the work unless otherwise specifically requested by Bank.

3. VISIT OF SITE

Intending Bidder shall visit the site and make himself thoroughly acquainted with the local site conditions, nature and requirements of the works, facilities of transport conditions, effective labour and materials, accesses and storage for materials and removal of rubbish. The Bidder shall provide in their tender for cost of carriage, freight and other charges as also for any special difficulties and including police restriction for transport etc. for proper execution of work as indicated in drawings. The successful Bidder will not be entitled to any claim of compensation for difficulties faced or losses incurred on account of any site conditions which existed before the commencement of the work or which in the opinion of the Employer might be deemed to have reasonably been inferred to be so existing before commencement of work.

4. TENDERS

The tender should be submitted by bidder duly priced .

The schedule of quantities shall be filled in as follows:

- i. The rates column to be filled.
- ii. The employer reserves the right to reject the lowest or any tender.

The Bank reserves the right to accept the tender in full or in part and the bidder shall have no claim for revision of rate or other conditions if his tender is accepted in parts.

The bidders should note that the tender is strictly on item rate basis and their attention is drawn to the fact that the rates for each and every item should be correct workable and self- supporting. If called upon by the employer detailed analysis of any or all the rates shall be submitted by the Contractor. The employer shall not be bound to recognize the contractor's analysis.

The works will be paid for as "measured work" on the basis of actual work done and not as "lump sum" contract.

All items of work described in the schedule of quantities are to be deemed and paid as complete works in all respects and details including preparatory and finishing works involved directly related to and reasonably detectable from the drawings, specifications and schedule of quantities and no further extra charges will be allowed in this connection. In the case of lump sum charges in the tender in respect of any item of works, the payment of such items of work will be made for the actual work done on the basis of lump sum charges as will be assessed to be payable by the Employer.

The employer has power to add to, omit from any works as shown in drawings or described in specifications or included in schedule of quantities and intimate the same in writing but no addition,

omission or variation shall be made by the Contractor without authorisation from the Employer, such variation by the Bank shall not vitiate the contract.

The bidder shall note that his tender shall remain open for consideration for a period of 90 days from the date of opening of the tender (Price Bid).

5. AGREEMENT

The successful Contractor may be required to sign agreement as may be drawn up to suit local conditions and shall pay for all stamps and legal expenses, incidental thereto.

6. AMENDMENT OF BIDDING DOCUMENTS

At any time prior to the last Date and Time for submission of bids, the Bank may, for any reason, modify the Bidding Documents through amendments at the sole discretion of the Bank. All amendments shall be uploaded on the Bank's websites (www.canarabank.com) and will be binding on all who are interested in bidding.

In order to provide prospective Bidders a reasonable time to take the amendment if any, into account in preparing their bid, the Bank may, at its discretion, extend the deadline for submission of bids.

7. CONTACTING THE BANK

Any effort by a bidder to influence the Bank in evaluation of the bid, bid comparison or contract award decision may result in the rejection of the Bidders' bid. Bank's decision will be final and without prejudice and will be binding on all parties.

8. CLARIFICATIONS OF BIDS

To assist in the examination, evaluation and comparison of bids the Bank may, at its discretion, ask the bidder for clarification. The response should be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

9. GOVERNMENT AND LOCAL RULES

The Contractor shall confirm to the provisions of all local Bye-laws and acts relating to the work and to the regulations etc. of the Government and local authorities and of any company with whose system the structure is proposed to be connected. The Contractor shall give all notices required by said act, rules, regulations and Bye- laws etc. and pay all fees payable to such authorities for execution of the work involved. The cost if any shall be deemed to have been included in his quoted rates, taking into account all liabilities for licenses etc. He shall indemnify the employer against such liabilities and shall defend all actions arising from such claims or liabilities.

10. TAXES AND DUTIES

The bidders must include in their tender prices quoted for all duties, royalties, cesses, labour cess, service tax, VAT, W.C.T. Sales tax or any other taxes or local charges, as applicable. However VAT shall be deducted at source at the specific rate and Service Tax to be paid by Bank extra as per Central Government regulations and guidelines respectively, if applicable. The certificate in respect of TDS shall be issued by the Bank as per rule. Any variation in taxes and duties and/or imposing any new taxes and duties during currency of contract or extended period shall be borne by the bidder. No claim whatsoever on this account shall be entertained.

11. PROVISIONAL SUM (P.S.)

All provisional sums described in the schedule of quantities as P.S. shall be exclusively allotted to the purchase of materials and not for any handling and fixing to be done by the Contractor. Such cost of handling and fixing with profit (including transport charges if required) shall be separately included in the contract price as described in the schedule of quantities. The disposal of the amounts covered under this head will be absolutely at the discretion of the employer. Contractor is to make

payments for these materials to the suppliers on certificate or orders issued by the employer and realize them through his bills from the employer.

12. QUANTITY OF WORK TO BE EXECUTED

The quantities shown in the schedule of quantities are intended to cover the entire renovation work but the Employer reserves the right to execute only a part or the whole or any excess thereof without assigning any reason therefore.

13. OTHER PERSONS ENGAGED BY THE EMPLOYER

The employer reserves the right to execute any part of the work included in this contract or any work which is not included in this contract by other agency or persons and Contractor shall allow all reasonable facilities and use of his scaffolding for the execution of such work.

14. EARNEST MONEY AND SECURITY DEPOSIT

The bidder will have to deposit an amount of **Rs. 40,000/- (Rupees Forty thousand only)** in the form of Bank draft drawn in favour of Canara Bank, payable at Kolkata at the time of submission of tender as an Earnest Money. The employer is not liable to pay any interest on the Earnest Money. The Earnest Money of the unsuccessful bidders will be refunded without any interest soon after the decision to award the work is taken.

The successful Tenderer to whom the Contract is awarded shall deposit as initial security deposit by BANK Draft a sum to make up 2% of the value of the accepted tender after the appropriation of the Earnest Money deposited by him, subject to a ceiling of **Rs 1.40 lacs**.

The initial Security Deposit will have to be made by the Contractor to the Bank within 14 days of acceptance of award letter, failing which the employer at his discretion may revoke the letter of acceptance and forfeit the earnest money deposit furnished along with the tender. The initial security deposit shall be accepted in the form of Demand draft not by Bank Guarantee. **No interest will be given on the INITIAL SECURITY DEPOSIT.** *The initial security deposit will be refunded to the Contractor within fourteen days after the issue of certificate of virtual completion.*

Apart from the initial security deposit made as above, retention money shall be deducted from the progressive running bills at 10% of the gross value of each running bill until the Total Security Deposit, i.e., the initial Security Deposit plus the retention money equals:

10.00% of the contract value

However the retention money on secured advance payable will not be deducted.

The retention amount will be refunded to the Contractor 14 (fourteen) days after the defect liability period is over provided the Contractor has satisfactorily carried out all the works and attended to all the defects in accordance with the conditions of contract. No interest is allowed on retention Money.

15. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY

The Contractor shall provide everything necessary for the proper execution of work according to the intent and meaning of the drawings, schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancies therein, he shall immediately and in writing refer the same to the employer whose decision shall be final and binding.

The rates quoted against individual items will be inclusive of everything necessary to complete the said items of work within the contemplation of the contract and beyond the unit price. No extra payments will be allowed for incidental or contingent work, labour and/or materials inclusive of all taxes and duties whatsoever except for specific taxes, if any, stipulated in the tender documents.

The Contractor shall supply, fix and maintain at his own cost for the execution of work, all tools tackles, machinery and equipment and all the necessary centering, scaffolding, 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 safety of any adjacent roads, streets, walls, houses, buildings all other erections, matters and things and Contractor shall take down and remove any or all such centering, scaffolding, planking, timbering, strutting, shoring etc. as occasion shall be required or when ordered to do so and shall fully reinstate and matters and things distributed during the execution of works to the satisfaction of the Employer

The Contractor shall at all times give access to workers by the Employer or any men employed on the buildings.

16. TIME OF COMPLETION, EXTENSION OF TIME & PROGRESS CHART

16.1 Time of completion

The entire work is to be completed in all respects within the stipulated period 60 days from the commencement date. Time is the essence of the contract and shall be strictly observed by the Contractor.

The work shall not be considered as completed until the Employer have certified in writing that work has been completed and the defects liability period shall commence from the date of such certificate.

16.2 Extension of Time

If, in the opinion of the Employer the works be delayed

- a) By reason of instruction from the employer in consequence of proceedings taken or threatened by or disputes, with adjoining or neighbouring owners or
- b) By the works, or delay, of other contractors or tradesmen engaged or nominated by the Employer and not referred to in the specification or
- c) By reason of authorized extra and additions or
- d) By reason of any combination of workmen or strikes or lock-out effecting any of the building trades or
- e) From other causes which the employer may consider are beyond the control of the Contractor, the Employer at the completion of the time allowed for the contract, shall make fair & reasonable extension of the time for completion in respect therefore. In the event of the Employer failing to give possession of the site upon the day specified above the time of completion shall be extended suitably.

In case of such strikes or lock-outs, as are referred to above, the Contractor shall immediately give the employer, written notice thereof. Nevertheless, the Contractor shall use his best endeavours all that to prevent delay, and shall do all that may be reasonably required, to the satisfaction of the employer to proceed with the works and on his doing so that it will be ground of consideration by the employer for an extension of time as above provided. The decision of Employer as to the period to allow for an extension of time for completion hereunder (Which decision shall be final and binding on the Contractor) shall be promulgated at the conclusion of such strike or lock-out and the employer shall then, in the event of an extension being granted, determine and declare the final completion date. *The provision in clause 16.4 with respect to payment of liquidated damages shall, in such case, be read and construed as if the extended date fixed by the employer were substituted for and the damage shall be deducted accordingly.*

16.3 Progress of work

During the period of execution the Contractor shall maintain proportionate progress on the basis of a programmed chart submitted by the Contractor immediately before commencement of work and agreed to by the Employer. Contractor should also include planning for procurement for scarce material well in advance and reflect the same in the programmed chart so that there is no delay in completion of project. Progress report of the work is to be submitted by the Contractor fortnightly in the format approved by the employer.

16.4 LIQUIDATED DAMAGES

Should the work be not completed to the satisfaction of the Employer within the stipulated period, the Contractor shall be bound to pay to the employer a sum calculated as given below by way of liquidated damages and not as penalty during which the work remains un commenced or unfinished after the expiry of the completion date.

1.0% of the contract amount shown in the tender per week subject to ceiling of 10.0% of the accepted contracted sum but not exceeding the total S.D. of the contract (I.S.D + Retention Money).

17. TOOLS, STORAGE OF MATERIALS, PROTECTIVE WORKS AND SITE OFFICE REQUIREMENTS

The contractor shall provide, fix up and maintain in an approved position proper office accommodation for the contractor's representative and staff which offices shall be open at all reasonable hours to receive instruction notices or communications and clear away on completion of the works and make good all work disturbed.

All drawings maintained on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved varnish. They are to be protected from ravages of termites, ants, and other insects.

The contractor shall provide at his own cost all artificial light required for the work to complete the work within the specified time.

The contractor shall arrange for temporary latrines for the use of workers and field staff and keep the same in a clean and sanitary condition to the satisfaction of the Public Health Authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the works disturbed by these conveniences.

Every precaution shall be taken by the contractor to prevent the breeding of mosquitoes on the works during the construction, and all receptacles cisterns, water tanks etc. used for the storage of water must be suitably protected against breeding of mosquitoes. The contractor shall indemnify the Employer against any breach of rules in respect of anti-malarial measures.

The contractor shall not fix or place any placards or advertisement of any description or permit the same to be fixed or placed in or upon any boarding, gantry, building structure other than those approved by the Employer.

Protective- Measures: The contractor from the time of being placed in possession of the site must make suitable arrangements for watching, lighting and protecting the work, the site and surrounding property by day, by night, on Sundays and other holidays.

Contractor shall indemnify the Employer against any possible damage to the building, roads, or members of the public in course of execution of the work.

Storage of materials: The contractor shall provide and maintain proper sheds for the proper storage and adequate protection of the materials etc. and other work that may be executed on the site including the tools and materials and remove same on completion.

Godown shall be erected for storing about six weeks' requirement of material. Structure shall be water-proof from all the sides and top. Material should be stored one feet-above the ground level and have pucca raised floor.

Tools: The odolite levels, prismatic compass, chain, steel and metallic tapes and all other surveying instruments found necessary on the works shall be provided by the contractor for the due performance of this contract as instructed by the Site Engineer. All measuring tapes shall be of steel and suitable scaffolding and ladders that may be required for safely taking measurement shall be supplied by the contractor.

The mistries and the supervisors on the works shall carry with them always a three metre or five metre steel tape, a measuring tape of 30 metres, a spirit level, a plumb bob and a square and shall check the work to see that the work is being done according to the drawing and specifications. The Site Engineer will use any or all measuring instruments or tools belonging to the contractors as he chooses for checking the works executed or being executed on the contract. The contractor should cover in his rates for making provision for all reasonable facilities for the use of his scaffolding, tools and plant etc., for their work.

18. NOTICE AND PATENTS OF APPROPRIATE AUTHORITY AND OWNERS

The Contractor shall confirm to the provisions or any acts of the legislature relating to the work, and to the regulations and by-laws of any authorities, and / or any water, lighting and other companies, and / or authorities with whose system the structures were proposed to have renovated and shall before making any variation from the drawings or specifications that may be associated to so confirm, give the Employer written notice, specify the variations proposed to be made and the reasons for making them and apply for instructions thereon. The Employer on receipt of such intimation shall give a decision with a reasonable time.

The Contractors shall arrange to give all notices required for by the said acts, regulations or By- laws to be given to any authority, and to pay to such authority or to any public officer all fees that may be properly chargeable in respect of the work and lodge the receipts with the Employer.

The Contractor shall indemnify the Employer against all claims in respect of patent rights, royalties, and damages to buildings, roads or member of public in course of execution of work and shall defend all actions arising from such claims and shall keep the Employer saved harmless and indemnified in all respects from such actions, costs and expenses.

19. CLEARING SITE AND SETTING OUR WORKS

The site shown on the plan shall be cleared of all obstructions, loose stone, and materials rubbish of all kinds.

20. CONTRACTOR TO REMOVE ALL OFFENSIVE MATTERS FROM THE SITE UPON COMPLETION OF WORK

The Contractor shall keep the surroundings of work places free from water, debris and excess / waste materials at his own expenses Electrical or other power driven equipment to the satisfaction of the Employer for the purpose, until the site is handed over to the Employer. The Contractor shall arrange for the disposal of the same so accumulated to the satisfaction of the Employer and the local authority and no claims will be entertained afterwards if he does not include in his rates for the purpose.

21. ACCESS

Any authorized representative of the Employer shall at all reasonable times have free access to the works and / or to the workshops, factories or other places where materials are being prepared or constructed for the work and also to any place where the materials are lying or from where they are being obtained, and the Contractor shall give every facility to the Bank

or their representatives necessary for inspection and examination and test of the materials and workmanship. Except the representatives of the Employer, no person shall be allowed at any time without the written permission of the Employer.

22. MATERIALS, WORKMANSHIP, SAMPLES, TESTING OF MATERIALS

All the works specified and provided for in the specification or which may be required to be done in order to perform and complete any part thereof shall be executed in the best and most workman like manner with materials of the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specifications and as represented by the drawings or according to such other additional particulars and instructions as may from time to time be given by the Employer during the execution of the work, and to his entire satisfaction.

If required by the Employer the Contractor shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by the Employer at his own cost to prove that the materials etc. under test confirming to the relevant IS standards or as specified in the specifications. The necessary charges for preparation of sample, transporting, testing etc. shall have to be borne by the Contractor. No extra payment on this account would in any case be entertained.

All the materials (except where otherwise described) stores and equipment required for the full performance of the work under the contract must be provided through normal channels and must include charge for import duties, sales taxes, octroi and other charges and must be the best of their kind available and contractors must be entirely responsible for the proper and efficient carrying out of the work. The work must be done in the best workman like manner. Samples of all materials to be used must be submitted to the Employer when so directed by the Engineer and written approval from Employer must be obtained prior to placement of order.

During the inclement weather the Contractor shall suspend works for such times as the Employer may direct and shall protect from injury all work during course of execution. Any damage (during repair & renovation) to any part of the work for any reason due to rain, storm or neglect of Contractor shall be rectified by the Contractor in an approved manner at no extra cost to Bank.

Should the work be suspended by reason of rain, strike, lock-outs or any other cause, the Contractor shall take all precautions necessary for the protection of work and at his own expense shall make good any damage arising from any of these causes.

The Contractor shall cover up and protect from damage, from any cause, all new work and supply all temporary doors, protection to windows, and any other requisite protection for the execution of the work whether by himself or special tradesmen or sub-Contractor and any damage caused must be made good by the Contractor at his own expenses.

Contractor to carry out all mandatory tests as per CPWD specifications besides the tests required to be done as ordered and desired by the Bank to prove that quality of material conforms to tender provisions. cost of such tests shall be borne by the contractor and no extra payment in this regard shall be payable.

23. REMOVAL OF IMPROPER WORK

The Employer 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 times as may be specified in the order of any materials which in the opinion of the Employer are not in accordance with specification or instructions, the substitution or proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instruction. In case the Contractor refuses to comply with the order the Employer shall have

the power to employ and pay other agencies to carry out the work and all expenses consequent thereon or incidental there to as certified by the Employer shall be borne by the Contractor or may be deducted from any money due to or that may become due to the Contractor.

24. SITE ENGINEER

The term "Site Engineer" shall mean the person posted at site by Employer to superintend the work. The Contractor shall afford the Site Engineer every facility and assistance for examining the works and materials for checking and measuring work and materials. The site Engineer shall have no power to revoke, alter, enlarge or relax any requirements of the Contractor or to sanction any day work, additions, alterations, deviations, or omissions or any extra work whatever, except in so far as such authority may be specially conferred by a written order of the Employer.

The Site Engineer shall have power to give notice to the Contractor or to his foreman of non- approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued until the decision of the Employer is obtained. The work will from time to time be examined by the Engineer from the premises department of the Employer and the Site Engineer, if any, but such examination shall not in any way exonerate the contractor from the obligation to remedy and defects which may be found to exist at any stage of the work or after the same is complete. Subject to the limitations of this clause the Contractor shall take instruction only from the Employer.

25. CONTRACTOR'S EMPLOYEES

The Contractor shall employ technically qualified and competent supervisors for the work who shall be available (by turn) throughout the working hours to receive and comply with instructions of the Employer. The Contractor shall engage at least one experienced Engineer as Site-in-Charge for execution of the work. The Contractor shall employ in connection with the work persons having the appropriate skill or ability to perform their job efficiently.

The Contractor shall employ local labourers on the work as far as possible. No labourer below the age of eighteen years and who is not an Indian national shall be employed on the work. Any Labourer supplied by the Contractor to be engaged on the work on day work basis either wholly or partly under the direct order or control of the Employer or his Representative shall be deemed to be a person employed by the Contractor.

The Contractor shall comply with the provisions of all labour legislations including the requirements of:-

- a. The payment of Wages Act
- b. Employer's Liability Act
- c. Workmen's Compensation Act
- d. Contract labour (Regulation 7 Abolition) Act, 1970 and Central Rules 1974
- e. Apprentices Act 1961
- f. Minimum Wages Act
- g. Any other Act or enactment relating thereto and rules framed thereunder from time to time.

The Contractor shall keep the Employer saved, harmless and indemnified against claims if any of the workmen or any other person and all costs and expenses as any be incurred by the Employer in connection with any claim that may be made by any workman or any other person.

The Contractors shall arrange to provide first-aid treatment to the labourers engaged on the works. He shall within 24 hours of the occurrence of any accident at or about the site or in connection with execution of the works, report such accident to the employer and also to the competent authority where such report is required by law.

26. DISMISSAL OF WORKMEN

The Contractor shall in the request of the Employer immediately dismiss from works any person employed thereon by him who may in the opinion of the Employer be unsuitable or incompetent or

who may misconduct himself. Such discharges shall not be the basis of claim for compensation or damages against the Employer or any of their officers or employee.

27. ASSIGNMENT

The whole of the works 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 or interest therein nor, shall take a new partner without written consent of the Employer and no subletting shall relieve the Contractor from the full and entire responsibility of the contract or from active superintendence of the work during their progress.

28. DAMAGE TO PERSONS AND PROPERTY INSURANCE ETC.

The Contractor shall be responsible for all injury to the worker or workmen or persons, animals or things and for all damages to the project works, materials, equipment, 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 or a 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 this contract.

The clause shall be held to include inter-alia any damage to buildings whether immediately adjacent or otherwise and any damage to roads, streets, foot paths or ways as well as damages caused to the buildings and the works forming the subject of this contract by rain, wind or other inclemency of the weather. The Contractor shall indemnify the Employer and hold harmless in respect of all and any expenses arising from any such injury or damages to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of compensation or damage consequent upon such claim.

The Contractor shall reinstate, rectify and remedy all damages of every sort mentioned in this clause so as to deliver the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damages to the property or third party.

The Contractor shall effect the insurance necessary and indemnify the Employer entirely from all responsibility in this respect. The insurance must be placed with company approved by the Employer and must be effected jointly in the name of the Contractor and the Employer and the policy lodged with the latter. The scope of insurance is to include damage or loss to the contract itself till this is made over in a complete state. Insurance is compulsory and must be affected for the very initial stage. The Contractor shall also be responsible for anything, which may be excluded from the damage to any property arising out of incidents, negligence or defective carrying out of this contract.

The Employer shall be at liberty and hereby empowered to deduct the amount of any damages, compensations, costs, charges and expenses arising or accruing from or in respect of any such claim or damages from any sums including the total security deposit due or to become due to the Contractor.

29. INSURANCE

Unless otherwise instructed the Contractor shall insure the works for all risk (include fire & third party) of the Contractor for total tender value and keep them insured until the virtual completion of the contract against any loss or damage of the material and of project. The insurance must be placed with a company approved by the Employer in the joint names of the Employer and the Contractor for such amount and for any further sum if called to do so by the Employer. The premiums of such further sum being allowed to the Contractor as an authorized extra. The Contractor shall deposit the policy and receipt premium paid with the Employer within twenty one days from the date of issue of work order unless otherwise instructed.

In default of the Contractor insuring as provided above the Employer on his behalf may so insure and may deduct the premiums paid from any money due, or which may become due to the Contractor. The Contractor shall as soon as the claim under the policy is settled or the work reinstated by Insurance Company should they elect to do so, proceed with due diligence with the completion of the works in the same manner as though the fire has not occurred and in all respects under the

conditions of the contract. The Contractor in case of rebuilding or reinstatement after fire shall be entitled to extension of time for completion, as the Employer may deem fit.

30. ACCOUNTS RECEIPT & VOUCHERS

The Contractor shall, upon the request of the Employer furnish them with all the invoices, accounts, receipts and other vouchers that they may require in connection with the works under this contract. If the Contractor shall use materials less than what he is required under the contract, the value of the difference in the quantity of the materials he was required to use and that he actually used shall be deducted from his dues. The decision of the Employer shall be final and binding on the Contractor as to the amount of materials. The Contractor is required to use for any work under this contract.

31. MEASUREMENTS

Before taking any measurement of any work the Site Engineer or a subordinate deputed by him shall give reasonable notice to the Contractor. If the Contractor fails to attend at the measurements after such notice or fails to countersign or to record the difference within a week from the date of measurement in the manner required by the Site Engineer then in any such event the measurements taken by the Site Engineer or by the subordinate deputed by him as the case may be is final and binding on the Contractor and the Contractor shall have no right to dispute the same.

32. PAYMENTS

All bills shall be prepared & submitted by the Contractor in the form prescribed by the Employer. Normally one interim bill shall be prepared subject to minimum value for interim certificate as stated in these documents. The bills in proper forms must be duly accompanied by detailed measurements in support of the quantities of work done and must show deductions for all previous payments, retention money etc. The bill shall be checked at site by Architect / Engineer shall issue a certificate after due scrutiny of the Contractor's bill which may be further verified by the Employer and the Contractor shall be entitled to payment thereof within the period of honouring certificates named in these documents, as per final verified amount by the Employer. In case of delay, an Adhoc advance of 60% of the billed amount /assessed work done may be paid on the request of the Contractor for the smooth progress of work at the sole discretions of the Bank.

The amount as stated in an interim certificate shall be the total value of work properly executed and secured advance on the materials as described under the heading of secured advance less the amount to be retained by the Employer as retention Money vide clause 14 of these conditions and less instalments previously paid under these conditions, provided the such certificate shall only include the value of said material and goods as and from such time as they are reasonably, properly and not prematurely brought to or placed adjacent to the work and then only if adequately protected against whether or other casualties.

The Employer will deduct retention money as described in Clause 14 of these Conditions. The refund of retention money will be made as specified in the said clause.

If the Employer had supplied any materials or goods to the Contractor, the cost of any such materials or goods will be progressively deducted from the amount due to the Contractor in accordance with the quantities consumed in the work.

All the interim payments shall be regarded as payment by way of advance against the final payments only and not as payments for work actually done and completed and shall not preclude the requiring of bad unsound and imperfect of unskilled work to be removed and taken away and reconstructed or re-erected or to be considered as an admission of the due performance of the contract or any part thereof in any respect or the accruing of any claim, nor shall, it conclude determine or affect in any way the

powers of the Employer under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the Contractor within one month of the date fixed for completion of the work or of the date of certificate of virtual completion furnished by Employer and payment shall be made within three months.

33. SECURED ADVANCE FOR MATERIAL AT SITE

No secured advance or any other advances to be paid for the purchase of materials.

34. FINAL PAYMENTS

The period of Final Measurements will be 1 Month from date of Completion. The final bill shall be accompanied by a certificate of completion from the Employer, payments of final bill shall be made after deduction of Retention Money as specified in clause 14 of these condition, which sum shall be refunded after the completion of the Defects liability period and rectification if defects to the entire satisfaction of the Employer. The acceptance of payments of the final bill by the Contractor would indicate that he would have no further claiming respect of the work executed.

35. VARIATION / DEVIATIONS

The Contractor may when authorized and shall, when directed in writing by the Employer add or omit, or vary the works shown in the drawings or described in the specifications or included in the priced schedule of the quantities. The Contractor on his own accord shall make no addition omission or variation without such authorization of direction. A verbal authorization of direction by the Employer shall when confirmed correctly by the Contractor in writing within 3 days shall be deemed to have been given in writing.

The Contractor shall send to the Employer once in every 15 days a statement giving particulars, as full and detailed as possible, of all claims for any additional payment to which the Contractor may consider himself entitled and of all extra or additional work ordered by the Employer which he has executed during the preceding month.

No interim claim for payment for any such work or expense, will be considered which has not been included in such a statement provided always that the Contractor shall be entitled after taking Employer's sanction to authorize payment to be made for any such work or expense, notwithstanding the Contractor's failure to comply with this condition.

The rates for additional, altered substituted work shall be arrived at in accordance with the following rules:-

- i. The net rates or prices in the contract schedule shall determine the valuation of (the rates for) the extra work (items) where such extra work is of similar character and is executed under similar conditions as the work prices therein.
- ii. If the rates for the extra altered or substituted or (deviated) work are not provided for (available) in the schedule of quantities, they shall, to the extent possible be derived out of rate given in that schedule for similar or near similar items. For the purpose of such deviation, where necessary and when so directed, the Contractor shall furnish detailed analysis for the said similar or near similar items in the contract schedule. For such portions of the analysis, for the extra, altered or substituted (deviated) work for which prices cannot be abstracted from the corresponding analysis of rates for the said similar or near similar items in the contract schedule, market rates sustained by purchase bill / vouchers dependable printed price schedule of materials of different type shall be adopted,

using factors and constant for quantum of materials, labour, T&P and sundries, from standard analysis of rates adopted by the CPWD, and adding 15% towards profit & overheads and taxes When called upon to do so, the Contractor shall submit the required purchase bills / vouchers.

- iii. In respect of contract which incorporates more than one schedule, the rate applicable in case (i) above if not provided for in the Schedule pertaining to the work in which the addition, alteration or substitution (deviation) occurs shall be taken as the lowest applicable rate in other schedules. Similarly in case (ii) above if similar or near similar items cannot be found in the schedule pertaining to the work in which the addition, alteration or substitution (deviation) occurs, similar or near similar items from the other schedule shall be adopted.
- iv. In the case of additional, altered substituted (deviated) for which rates cannot be reasonably be derived as at (ii) and (iii) above, the rates shall be worked out adopting market prices, substantiated by purchase bills / vouchers using factors and constants for quantum of materials, labour, T&P and sundries from standard analysis of rates adopted by the CPWD and adding 15% towards profit & overheads and taxes. When called upon to do so the Contractors shall submit his purchase bills / vouchers to the Employer.
- v. The question as to what particular items, being similar or near similar to the additional, altered or substituted (deviated) work in the contract schedule are to be adopted for deviation of rates for the additional, altered for substituted deviated work and whether the said rates cannot be derived from similar or near similar items in the contract schedule will be decided by the Employer.
- vi. In case (ii) to (iv) the Contractor is required to submit his analysis of rates adopting the principles enunciated, after scrutinizing the analysis any other papers furnished will allow such rates as he considers reasonable after obtaining Employer's sanctions.
- vii. Where extra work is of such a nature that it cannot be properly measured or valued, the Contractor shall be allowed day work priced at the net rates stated in the tender or the priced schedule of quantities or if not so stated then in accordance with the minimum local day work rates and wage for the district notified by the concerned authority provided that in either case if required by the Employer, vouchers, muster rolls and other documents, required for proper verification of the labour employed and the materials deployed on the said work and the costs thereof be delivered to the site Engineer or his representative on or before the end of the week following that in which work has been executed.
- viii. The question as to whether extra work is of such nature that it cannot be properly measured or valued will be decided by the Employer. The margin to be allowed on actual costs to the Contractor towards profit and overhead shall be 15% and taxes

36. SUBSTITUTION

Should the Contractor desire to substitute any materials and workmanship, he/they must obtain the approval of the Employer in writing for any such substitution well in advance. Materials designated in this specification indefinitely by such terms as "Equal" or "other approved" etc., specific approval of the Employer has to be obtained in writing.

37. PREPARATION OF BUILDING WORKS FOR OCCUPATION AND USE ON COMPLETION

The whole of the work will be thoroughly inspected by the Contractor and deficiencies and defects put right. On completion of such inspection and Contractor shall inform the Employer that he has completed the work and it is ready for inspection.

On completion, the Contractor shall clean all equipment's and do the painting work etc. He will leave the entire installation neat and clean and ready for immediate use and to the satisfaction of the Bank.

38. CLEARING SITE ON COMPLETION

On completion of the works, the Contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and the works clean and in a workman like condition to the satisfaction of the Employer.

39. DEFECTS AFTER COMPLETION

The defects liability period (D.L.P.) shall commence from the certified date of Virtual Completion issued by the Employer. The Contractor shall make good at his own cost and to the satisfaction of the Employer all defects, other faults which may appear within 12 months after completion of the work. In default, the Employer may employ and pay other persons to amend and make good such damages, losses and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damages, losses and expenses shall be recoverable from him by the employer or may be deducted by the Employer, in lieu of such amending and making good by the Contractor, deduct from any money due to the Contractor a sum equivalent to the cost of amending such work and in the event of the amount retained being insufficient, recover that balance from the Contractor from the amount retained under clause no. 14 together with any expense the Employer may have incurred in connection therewith.

40. CONCEALED WORK

The Contractor shall give due notice to the Employer whenever any work is to be buried in the earth, concrete or in the bodies of walls or otherwise becoming inaccessible later on, in order that the work may be inspected and correct dimensions taken before such burial, in default whereof the same shall, at the option of the employer be either open up for measurement at the Contractor's expense or no payment may be made for such materials. Should any dispute or difference arise after the execution of any work as to measurements etc., or other matters which cannot be conveniently tested or checked, the notes of the Employer shall be accepted as correct and binding on the Contractor.

41. IDLE LABOUR

Whatever the reasons may be, no claim for idle labour, additional establishment cost of hire and labour charges of tools and plants would be entertained under any circumstances.

42. SUSPENSIONS

If the Contractor, except on account of any legal restraint upon the Employer preventing the continuance of the work, abandons, suspends work or in the opinion of the Employer, the Contractor neglects or fails to proceed with due diligence in the performance of his part of the contract, the Employer shall have the power to give notice in writing to the Contractor requiring the work be proceeded within a reasonable manner and with reasonable dispatch, such notices purport to be a notice under this clause.

After such notice shall have been given the Contractor shall not be at liberty to remove from the site of the works or from any ground contiguous thereto any plant or 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 has been given to proceed with the works as therein prescribed, the Employer may proceed as provided in clauses 44 (Termination of contract by Employer).

44. TERMINATION OF CONTRACT BY EMPLOYER

In the following circumstances/ events the contract will be terminated by the employer:-

- i. If the Contractor being the company go into liquidating whether voluntary or compulsory.
- ii. Being a firm shall be dissolved.
- iii. If the official assignee in insolvency or receiver of the contractor in insolvency, shall repudiate the contract.
- iv. If receiver of the contractor's firm appointed by the court shall be unable to, within 14 days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carrying out and fulfil the contract and if so required by the employer to give reasonable security therefore.
- v. If the contractor:
 - a) Shall suffer execution to be issued
 - b) Shall suffer any payment under this contract to be attached by or on behalf of and of the creditors of the contractor
 - c) Shall assign, charge or encumber this contract or any payment due or which become due to the contractor hereunder
 - d) Shall neglect or fail to observe and perform all or any of the acts, matters of things by this contract, to be observed and performed by the Contractor within three clear days after the notice shall have been given to the Contractor in manner hereinafter mentioned requiring the Contractor to observe or perform the same
 - e) Shall use improper materials or workmanship in carrying on the works
 - f) Shall in the opinion of the Employer not exercise such due diligence and make such due progress as would enable the work to be completed within due time agreed upon, and shall fail to proceed to the satisfaction of the Employer after three clear days' notice requiring the Contractor so to do shall have been given to the Contractor as hereinafter mentioned,
 - g) Shall abandon the contract then and in any of the said cases.
 - h) Any threat is perceived or observed on the security of Bank's data / property out of any action by the staff deployed for monitoring / configuration etc., by service provider.

The Bank may notwithstanding previous waiver determine the contract by a notice in writing to the effect as hereinafter mentioned, but without thereby effecting the powers of the employer & the obligations & liabilities of the contractor the whole of which shall continue in force as fully as if the contract, had not been so determined and as if the works subsequently executed had been executed by or on behalf of the contract (without thereby creating any trust in favour of the contractor).

Further the employer or his agent, or servant:

- i. may enter upon and take possession of the work and all plants, tools, scaffoldings, sheds, machinery, steam and other power utensils and materials lying upon premises or the adjoining lands or roads and sell the same as his own property
- ii. may employ the same by means of his own servants and workmen in carrying on and completing the works
- iii. by employing any other Contractors or other persons or person to complete the works and the Contractor shall not in any way interrupt or do any act, matter of thing to prevent or hinder such other Contractors or other persons or persons employed for completing and finishing or using the materials and plants for the works.

When the works shall be completed, or as soon thereafter as conveniently may be, the Employer shall give notice in writing to the Contractor to remove his surplus materials and plants, and should the Contractor fail to do so within a period of 14 days after receipt of the notice by him, the Employer may sell the same by public auction and shall give credit to the Contractor for the amount so released. Any expenses or losses incurred by the employer in getting the works carried out by other Contractors shall be adjusted against the amount payable to the Contractor by way of selling his tools and plants, or due on account of work carried out by the Contractor prior to engaging other Contractors or against the Security Deposit.

45. ARBITRATION

All disputes arising out of or in connection with this agreement shall be deemed to have arisen in Kolkata and only Kolkata High Court shall have the jurisdiction to determine the same.

All disputes or differences of any kind whatsoever which shall at any time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof of this contract or the rights touching or concerning the works or the execution of maintenance thereof this contract or the construction remaining operation or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during or after determination for closure or breach of the contract (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice by either party to the contract to the other of them and to the Employer hereinafter mentioned be referred for adjudication to a sole arbitrator to be appointed as hereinafter provided.

For the purpose of appointing the sole Arbitrator referred to above, the Employer will send within thirty days of receipt of the notice, to the Contractor a panel of three names of persons who shall be presently unconnected with the organization for which the work is executed.

The Contractor shall on receipt of the names as aforesaid, select any one of the persons named to be appointed as a sole Arbitrator and communicate his name to the Employer within thirty days of receipt of the names. The Employer shall thereupon without any delay appoint the said person as the Sole Arbitrator. If the Contractor fails to communicate such selection as provided above within the period specified, the component authority shall make the selection and appoint the selected person as the Sole Arbitrator.

If the Employer fails to send to the Contractor the panel of three names as aforesaid within the period specified, the Contractor shall send to the Employer a panel of three names of persons who shall all be unconnected with either party. The Employer shall on receipt of the names as aforesaid select any one of the persons named and get appointed him as a Sole

Arbitrator. If the Employer fails to select the person and appoint him as the Sole Arbitrator within 30 days of receipt of the panel and inform the Contractor accordingly, the Contractor shall be entitled to appoint one of the person from the panel as the Sole Arbitrator and communicate his name to the Employer.

It is also a term of contract that if the contractor does not make any demand of arbitrator in respect of any claim, within 90 days of receiving the intimation from the Bank that the final bill is ready for payment, the claim, if any received after 90 days period, shall be absolutely barred from reference to the arbitrator.

If the Arbitrator so appointed is unable or unwilling to act or resign his appointment or vacates his office due to any reason whatsoever another Sole Arbitrator shall be appointed as aforesaid.

The work under the contract shall however continue during the Arbitration proceedings & no payments due or payable to the Contractor shall be withheld on account of such proceedings.

The Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties fixing the date of the first hearing.

The Arbitrator may from time to time with the consent of the parties enlarge the time for making and publishing the award.

The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of Arbitration shall be such place as may be fixed by Arbitrator on his sole discretion.

The fees, if any, of the Arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The costs of the reference and of the award including the fees, if any, of the Arbitrator who may direct to and by whom in what manner such costs or any part thereof shall be paid and may fix or settle the amount of cost to be so paid.

The award to the Arbitrator shall be final and binding on both the parties. Subject to aforesaid the provisions of the Arbitration & Consolidation Act 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being enforce, shall apply to the Arbitration proceeding under this clause. The Employer and Contractor hereby also agree that arbitration under clause shall be a condition precedent to any right to action under the contract with regard to the matters hereby/ expressly agreed to be so referred arbitration.

46. EXCEPTED MATTERS FROM ARBITRATION

If the dispute or difference pertains to the under noted matters (called excepted matters) the decision in writing of the Employer shall be final, conclusive and binding on the parties.

- a. Instruction
- b. Transactions with local authorities.
- c. Proof of quality of materials.
- d. Assigning or under letting of the contract
- e. Certificate as to the causes of delay on the part of the Contractor and justifying extension of time.
- f. Rectifying of defects pointed out during the defects liability period.
- g. Notice to the Contractor to the effect that he is not proceeding with due diligence.
- h. Certificate that the Contractor has abandoned the contract.
- i. Notice of the determination of the contract by the Employer.

47. RIGHTS OF TECHNICAL SCRUTINY BY CHIEF TECHNICAL EXAMINER

The work is liable to be technically audited by the Chief Technical Examiner of the Central vigilance Commission Government of India from time to time. Any defects, improvements or testing etc. pointed out by the Chief Technical Examiner should be carried out by the Contractor at his own cost and any deduction suggested by the CTE will be effected.

The Employer shall have a right to cause a technical examination and audit of works and the final bills of the Contractor including all supporting vouchers, abstract etc. to be made at the time of payment of the final bill. If as a result of this examination or otherwise any sum is found to have been over paid in respect of any work done by the Contractor under the contract the Contractor shall be liable to return the amount of over payment and it shall be lawful for the Employer to recover the same from him from any sum or sums due to him and in any other manner legally permissible and if it is found that the Contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by the Employer.

Any sum of money due and payable to the Contractor (including Security Deposit returnable to him) under this contract may be appropriated by the Employer and set off against any claim of the Employer of the payment of a sum of money arising out of or under any other contract made by the Contractor with Employer.

48. WATCH AND LIGHTING

The Contractor shall provide and maintain at his own expense all lights, guards, fencing and watching when and where necessary or required by Employer for the protection of the works or for the safety and convenience of those employed on the works or the public.

49. CONTROL RECORDS

The under noted record books at the site of work shall be maintained in addition to normal routine requirements by the Contractor.

- a. Work site order book.
- b. Instruction by Bank's officers.
- c. Test registers of other materials / fittings fixtures equipment as stipulated in the tender.
- d. Register of drawings and working details.
- e. Log book of defects.
- f. Hindrances register giving details of commencement and removal of each hindrance.
- g. Dismantled materials account register.
- h. Specifications C.P.W.D. & I.S.I. as applicable to the contract. These

registers are to be got signed by the Site Engineer.

50. SECURITY ARRANGEMENT

- i. Proper arrangements shall be made to keep all records under lock and key.
- ii. It shall be ensured that the Contractor provides watch and ward and security of materials.
- iii. Movement of material and stores, shall be through Bank gate pass only
- iv. When the work is completed and handed over to the Bank, the responsibility of proper security arrangement shall rest with the Bank.

51. LABOUR RECORD

The Contractor shall maintain relevant records and fulfil all conditions and requirements in accordance with following Act and Rules made there under.

- i. The payment of Wages Act. b) Employer's Liability Act. ii. Workmen's Compensation Act.
- iii. Contract Labour (Regulation & Abolition) Act, 1970 and Central Rules 1971.
- iv. Apprentices Act 1961.
- v. Minimum Wages Act 1948.
- vi. Industrial Disputed Act. 1947.
- vii. Maternity Benefit Act 1961.
- viii. ESI Act.
- ix. Payment of Bonus Act.
- x. Payment of Gratuity Act.
- xi. Any other Act are enactment relating thereto and rules framed there under from time to time.

Bank shall not be responsible for any violation by the contractor on the above mentioned acts/ rules. Contractor will be wholly/ solely responsible for any claim in the above referred subjects.

52. HANDING OVER BUILDING / PROJECT WORK TO THE EMPLOYER

Handing and taking over report and inventories / statement (in quadruplicate) at handing over shall be prepared. The reports and inventories shall be signed by:

- i. The Contractor (only the relevant papers).
 - ii. The Architect / Engineer, and
 - iii. Competent Authority in the Bank.
- The following inventories / statements shall be prepared:

- i. Inventory of all equipment's
- ii. Information folders & test reports for installations and as built drawings

The Engineer on behalf of the Employer associated with this operation, shall be apprised of the importance to carry out periodic inspections (at two months interval) for defects not rectified or fresh ones that crop up and issuing notice for their rectification to the concerned Contractors and the final inspection just before the expiry of the defects liability period.

53. DELINQUENCIES OF CONTRACTORS

The under noted delinquencies / defaults / misconduct / misdemeanours on the part of bidder or enlisted contract will attract disciplinary action.

- i. Incorrect information about credentials, about his performance, equipment, resources, technical staff etc.
- ii. Non-submission of the fresh / latest Income Tax Clearance certificate.
- iii. Irregular tendering practice.
- iv. Submission of tender containing for too many arithmetical errors and freak rates. e) Revoking a tender without any valid reasons.
- v. Tardiness in commencing work.
- vi. Poor organization at site & lack of his personal supervision.
- vii. Ignoring Employer's Notices for replacement / rectification of rejected materials, workmanship etc.
- viii. Violating any of the important conditions of contract, i.e. site facilities, insurance, labour laws, ban on subletting etc.
- ix. Lack of promptitude and co-operation in measurement of work and settlement of final account.
- x. Non-submission of vouchers and proofs of purchase etc.
- xi. Tendency towards putting up - false and untenable claims.
- xii. Tendency towards suspension of work for frivolous reasons.
- xiii. Bad treatment of labour.
- xiv. Bad treatment of Sub-Contractors (piece workers) and un-business like dealing with suppliers of materials.
- xv. Lack of co-operation with nominated Contractors or Employer's Labour.
- xvi. Contractor becoming Bankrupt or insolvent.
- xvii. Contractor's conviction by a court of law.
- xviii. Failure to satisfactorily rectify defects during Defects Liability period (DLP) and discovery of latent defects in Contractors work after the expiry of DLP of his contract.

54. DISCIPLINARY ACTION AGAINST (DELINQUENCIES OF) CONTRACTOR.

The award of the under noted disciplinary action shall be considered.

- i. Placing embargo on issue of tenders of temporary suspension from the Employer's approved list.
- ii. Permanent ban on issue of tenders & removal from the Employer's approved list.
- iii. Circulation of the Contractor name to other public Undertaking or Government Department for non- entertainment of this publication for contract work.

55. FORCE MAJEURE

Any failure or delay by bidder or Bank in performance of its obligations, to the extent due to any failure or delay caused by fire, flood, earthquake or similar elements of nature, or acts of God, war, terrorism, riots, civil disorders, rebellions or revolutions, acts of governmental authorities or other

events beyond the reasonable control of non-performing Party, is not a default or a ground for termination. The affected Party shall notify the other party within reasonable time period of the occurrence of a Force Majeure Event.

56. SAFETY CODES

56.1 SCAFFOLDING

- a. Suitable scaffolds shall be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration work which can be done "safely from ladders" when a ladder is used, it shall be of rigid construction made either of good quality wood or steel. The steps shall have a minimum width of 450 mm and a maximum rise of 300 mm. Suitable hand hold of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal and 1 vertical).
- b. Scaffolding or staging more than 4M, above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 1M, above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- c. Working platforms, gangways and stairway shall be so constructed that they do not sag unduly or unequally and if the height of the platform, gangway or stairway is more than 4m, above ground level or floor level, they shall be closely boarded and shall have adequate width and be suitably fenced as described in (ii) above.
- d. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing with nylon wire net through out the entire stretch where work is carried out and railing whose minimum height shall be 1M.
- e. Where ever there are open excavations in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.
- f. Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9M, in length while the width between side rails in rung ladder shall in no case, be less than 290 mm, for ladder up to and including 3M, in length for longer ladders this width shall be increased at least 20 mm for each additional meter of length.
- g. A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to construction.

56.2 OTHER SAFETY MEASURES

- a. All personnel of the Contractor working within the site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all metal workers shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.

- b. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.

56.3 DEMOLITION / DISMANTLING

Before any demolition/dismantling work is commenced and also during the process of the work:

- i. No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
- ii. All practical steps shall be taken to prevent danger to persons employed from the risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials as to render it unsafe.
- iii. Existing A/c outdoor units/machines are not to be disturbed and if they are to be disturbed the contractor has to do so on his own after taking prior permission from the Bank.

57. PERSONAL SAFETY EQUIPMENTS

All necessary personal safety equipment as considered adequate by the Engineer should be kept available for used of the person employed on the site and maintained in a condition suitable for immediate use, and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.

- i. Those engaged in white washing and mixing or stacking or cement begs or any materials, which are injurious to the eyes, shall be provided with protective goggles.
- ii. Those engaged in welding works shall be provided with welder's protective eyesight lids.
- iii. Stonebreakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- iv. The Contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, the following precaution should be taken:
 - a) No paint containing lead or lead products shall be used except in the form of paste or ready-made paint.
 - b) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
 - c) Overalls shall be supplied by the Contractor to the workman and adequate facilities shall be provided, to unable the working painters during the execution of work.
- v. When the work is done near any public place where there is risk of drowning all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

58. MODIFICATION AND WITHDRAWAL OF BID BY THE TENDERER

58.1. Modification of the submitted bid shall not be allowed.

58.2. Bids once submitted will be treated as final and no bid may be modified subsequent to the deadline.

58.3. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of period of bid validity specified in tender documents. For withdrawal of bid after the end date of bid submission, the bidder will have to make a request in writing to Tender Inviting Authority of Bank. Withdrawal of bid may be allowed till issue of work order with the following provision of penal action:

58.3.1. If the request of withdrawal is received before fixing the date for opening of price bid, the EMD submitted by bidder will be forfeited and bidder will be debarred for 6 months from participating in tenders in PNB. The price bid of remaining technically qualified bidders will be opened and the tender process shall go on.

58.3.2. If the request of withdrawal is received after fixing the date for opening of price bid, the EMD submitted by bidder will be forfeited and bidder will be debarred for 1 year from participating in tenders in PNB. The price bid of all technically qualified bidders including this bidder (if he found technically eligible) will be opened and action will follow as under:

- a) If the bidder withdrawing his bid is other than L-1, the tender process shall go on.
- b) If the bidder withdrawing his bid is L-1, the re-tender will be done.

INSTRUCTIONS TO BIDDERS

1. BIDDING PROCESS (TWO STAGES)

For the purpose of the present job, a two-envelope bidding process will be followed. The response to the present tender will be submitted in two parts:

- Technical bid
- Commercial bid

The bidders will have to submit the technical and commercial bid in hard copy only.

1.1 TECHNICAL BID

TECHNICAL BID will also contain the Compliance statement as per the Terms & Conditions mentioned in the Tender Documents, and NOT contain any pricing or commercial information at all. Technical bid documents with any commercial information will be rejected.

In the first stage, only TECHNICAL BIDS will be opened and evaluated. Only those bidders confirming compliance to all the terms & conditions of Tender document shall be short-listed for commercial stage.

1.2 COMMERCIAL BID

In the second stage, the COMMERCIAL BID of only those bidders, whose technical bids are short listed, will be opened.

2. SUBMISSION OF BIDS

2.1 Bidders are required to strictly submit their bids in hard copy only.

2.2 It is to be noted that all the technical supporting documents should be submitted manually in a sealed envelope shall be super scribed as “**Technical bid for External Civil Repair works of Bell's House at Camac Street** ” before the final date & time of bid submission at the following address.

2.3 **Cost of Tender Document of Rs.4,000/- along with EMD of Rs. 40,000/-** shall be submitted in a sealed envelope shall be super scribed as “**External Civil Repair works of Bell's House at Camac Street** ” before the final date & time of bid submission at the following address.

**CIRCLE HEAD
CANARA BANK
BELL'S HOUSE,CAMAC STREET
KOLKATA-17**

2.4 At the time of physical submission of bid, bidder has to show acknowledgement e- mail received after completion of the bid submission in proof of having submitted the bid online.

3. CONTENT OF DOCUMENTS TO BE SUBMITTED

- i. Documents required in Technical Bid Envelope (Sealed Cover):
- ii. Bidders undertaking letter(annexure I)
- iii. Supporting documents as per Eligibility Criteria
- iv. Performance/Completion Certificate from clients
- v. Bidder Information
- vi. Acceptance of Compliance Statement
- vii. Duly signed Tender document and corrigendum, if any
- viii. Copy of last three years audited balanced sheet.

- ix. Bid Earnest Money/Tender Document cost.
- x. Power of attorney in favour of authorized person signing the Bid documents.

Note: a. All pages of the bid documents must be signed by authorized person.
b. All pages of the bid documents should be numbered in serial order i.e. 1, 2, 3...
c. Commercial bid to be submitted in hardcopy of the same be enclosed with the supporting documents.

4. PRELIMINARY EXAMINATION

4.1 Bank will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required information has been provided as underlined in the bid document, whether the documents have been properly signed, and whether bids are generally in order.

4.2 The bid determined as not in order as per the eligibility criteria will be rejected by the Bank. The decision of the Bank is final towards evaluation of the bid documents.

5. EVALUATION AND AWARD CRITERIA

5.1 After opening of the technical bids, all the documents and annexure (except commercial documents/offer) will be evaluated first by the Bank. First, received bids will be evaluated based on the eligibility criteria. Technical bids of only those bidders satisfying the eligibility criteria will be evaluated.

5.2 Only those bidders satisfying the technical requirements and accepting the terms and conditions of this document shall be short-listed for further steps.

5.3 CANARA BANK will determine to their satisfaction whether the bidder selected as having submitted the best evaluated responsive bid is qualified to satisfactorily perform the contract. The decision of CANARA BANK will be final in this regard.

5.4 The determination will take into account bidder's financial, technical and support capabilities, based on an examination of documentary evidence submitted by bidders in support of eligibility criteria.

5.5 The award of contract will be based on evaluation of technical and commercial bids.

REFER TO ANNEXURE I(TO BEDULY FILLE AND SUBMITTED WITH TECHNICAL BID)

SPECIAL CONDITIONS FOR CONTRACT

1. The bidder shall acquaint himself with the proposed site of work before quoting his rates. The contractor should note and bear in mind that the Bank shall bear no responsibility for the lack of acquaintance of site and other conditions or any information relating thereto or on their part.
2. If for any reasons, any part of the site is not available temporarily for some time for part of the work under the contract, the agreed construction schedule shall be suitably modified and contractor shall diligently divert his men and materials to utilize them appropriately, profitably and no claim of damages whatsoever shall be entertained on this account. However, the contractor shall be allowed extension of time for completing the work as deemed fit by the competent authority. The contractor shall also not be entitled to any compensation for any loss suffered by him and revision in the rates quoted by him.
 - a) On account of delay in commencing the work by the contractor.
 - b) On account of reduction in the scope of work.
 - c) On account of suspension of work or abandoned after award of work.
3. The contractor shall provide, at his own cost instruments for weighing and measuring purpose at the site of work as may be necessary for execution of the work.
4. The contractor shall construct a sample unit of different activities complete in all respect as per the directions of the Engineer-in-charge. This sample unit shall be got approved from the Engineer-in-charge before commencing the mass work.
5. The contractor shall take care of all safety precautions pertaining to construction of work, such as scaffolding, ladder, working platforms, gangways, electric arc/ gas welding, use of hoist and construction machinery.
6. On account of security consideration, some restrictions may be imposed by the security staff on the working and/ movement of men and materials etc. The contractor shall be bound to follow all such restrictions/ instructions and he shall organize his work accordingly. No claim on this account, whatsoever, shall be payable.
7. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused to existing/ new work due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work.
8. The contractor shall be responsible for the watch and ward of all materials brought by the contractor to site against pilferage and breakage during the period of installation and thereafter till the works are physically handed over to the Bank.
9. The contractor shall take all preventive measures against any such damage caused by rain, snowfall, floods or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the owner's property and to the work for which the payment has been advanced to him under the contract.
10. The work will be carried out in the manner complying, in all respects, with the requirements of relevant bye-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Architect / Engineer-in-Charge and nothing extra shall be paid on this account.
11. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fees and charges which may be liable.

12. The contractor shall give due notices to Municipal, Police and/or other authorities that may be required under the law/rules under force in the area and obtain all requisite licenses for temporary obstructions / enclosures and pay all charges which may be leviable on account of his execution of work under the agreement. Nothing extra shall be payable on this account.
13. All materials to be incorporated in the work shall be arranged by the contractor and shall be in accordance with the specifications laid down. Samples of all items are to be fabricated by the Contractor prior to taking up the mass production. These samples are to be got approved by them from the Bank before proceeding for mass production.
14. The bidder shall use materials bearing ISI Certification Mark unless otherwise specified or allowed in writing by the Architect / Engineer-in-Charge. Any material banned by the Bank shall not be used in the work.
15. The contractor shall submit to the Architect / Engineer-in-charge samples of all materials for approval. Such samples of materials which affect aesthetics of the work shall also be got approved from the Architect / Engineer-in-charge of the project before procuring bulk supplies. These approved samples shall be preserved and retained in the custody of the Architect / Engineer-in-charge as standards of materials till the completion of the work. The cost of such samples shall be borne by the Contractor and nothing shall be payable on this account over the Agreement rates.
16. The contractor shall be required to get all the necessary mandatory and other tests as per the specifications/ IS codes, carried out on materials/ work from an approved laboratory as per the direction of the Architect / Engineer-in-charge. The testing charges and conveyance from the site shall be borne by the contractor.
17. In case any material / work is found sub-standard the same shall be rejected by the Engineer-in-charge and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Architect / Engineer-in charge at the risk and cost of the contractor without giving any further notice and time. In order to ensure quality of work during its execution, the Architect / Engineer-in-charge may require samples for mandatory or routine testing of materials. All costs of these samples, their packaging, conveyance from the site to the testing laboratory and return, shall be borne by the contractor.
18. Even ISI marked materials May be subjected to quality test at the discretion of the Engineer in-charge. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Architect / Engineer-in-charge, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the materials procured by the contractor, satisfy the provisions of relevant ISI codes. The testing charges shall be borne by the contractor.
19. Cement bags shall be stored in separate godowns to be constructed by contractor at his own cost.
20. The contractor shall procure 53 grade (conforming to IS:8112) ordinary Portland cement
21. The contractor shall supply free of charge the material required for testing. The cost of tests shall be borne by the contractor.
22. The work shall be executed and measured in metric system. The metric dimensions given in the schedule of quantities and drawing etc. shall be followed. (The dimension in FPS units wherever indicated are for guidance only) The figures in the drawings shall be followed.
23. The contractor shall be responsible for completing the work and for satisfying all terms and conditions of the Contract without any extra payment over his quoted rates unless otherwise specified. The contractor shall quote his rate for various items of work accordingly and no

claim whatsoever shall be entertained for any incidental or extra work involved in the execution of the work as per nomenclature of the item and the specifications indicated in the tender documents.

24. Subject to the nomenclature of the item as per schedule of quantities, the specification indicated in the tender documents, the rates quoted shall include cost of all materials including royalty and taxes if any, labour, sundry inputs, execution of work at all heights, levels, pattern and design for all leads, lifts and depths including overhead charges and contractor's profit. Nothing extra shall be paid on this account.
25. The rate shall be inclusive of making design, pattern and execution of work as per Architectural drawings, at all levels and heights.
26. Other agencies doing works related with this project will also simultaneously execute the works and the contractor shall afford necessary co-ordination for un-hindered completion of these sub-works.
27. The contractor shall give a satisfactory performance test of installations individually and as a whole to ensure their proper functioning before the work is finally declared and completed and accepted.
28. The contractor shall continue to maintain watch and ward to safeguard the Owner's property in his possession until the same is formally handed over as per directions of the Architect / Engineer-in-charge. Nothing extra over agreement rates shall be paid on this account.
29. All tools, plants and measuring or weighing equipment shall be arranged by the contractor himself and nothing extra shall be paid to the contractor on this account.
30. The quantities of various items incorporated in the tender are approximate. However, the payments shall be made to the contractors on the basis of actual measurements taken at site.
31. The contractor shall protect the adjoining buildings or works and the work under execution from fire and shall make adequate arrangements for fire protection and fire fighting and if any property is damaged, by fire due to the negligence of the contractor, the same shall be made good by the contractor at his own cost, to the entire satisfaction of Architect / Engineer-in charge.
32. The contractor shall provide adequate lighting arrangements as approved by the Architect / Engineer in-charge for carrying out the work during night time, if so required and also provide all other facilities for the labour employed to carry out the work as per direction of Architect / Engineer in-Charge.
33. In order to achieve the targeted date of completion the contractor may have to work in multiple shifts, round the clock including public and gazetted holidays and nothing extra shall be paid on this account
34. All materials, articles and workmanship shall be of respective best quality and kind for the class described in the schedule of quantities and specifications. All materials, so used in different items of work shall be subject to the approval of the Architect / Engineer-in-charge.
35. The contractor shall be responsible for all statutory provisions and deductions towards ESI, PF or any other, as the case May be or any other levies and taxes shall be borne by the contractors. The TDS, and VAT/ Contract Tax or any other statutory levels/taxes incorporated from time to time shall be deducted progressively from the running account bills, as applicable at the time of payment. No claim in this regard shall be entertained. Only Service tax will be paid by Bank as per Central Govt. directions.

36. The contractor is supposed to abide the minimum wages act, and shall produce all records to the Architect / Engineer-in-charge or any other statutory authority as and when called for. The Architect / Engineer- in-charge does not hold any responsibility on account of any lapses in this regard.
37. No extension of time shall be granted to the contractor on account of rains or inclement weather conditions.
38. For any clarification/ doubt, the Bank may organize regular meetings with Contractor. The contractor shall attend such meetings invariably as and when required.
39. In respect of the work of other agencies, where the commencement or progress of such work of any other agency is dependent upon the completion of particular portions of the contractor's work or generally upon the contractor maintaining progress in accordance with the approved coordinated construction programme, it shall be the responsibility of the Contractor to complete such portions and maintain such progress.
40. The contractor shall have to do all drilling of holes and cutting of walls, chases or other elements of the building for the complete and proper installation of the pipe lines/ ducts and other equipments by using electrically operated tools such as drills/ chases cutting machine etc. Manual drilling or chiseling or cutting shall be permitted on special request only. Prior permission for the same is to be obtained from the Bank.
41. No chiseling or cutting or drilling of RCC columns, beams, girders and other principal structural members shall be done unless prior permission has been granted by the Engineer in charge in writing.
42. All chases and openings made by the contractor for his pipe lines shall be filled/ covered over with cement plaster in reasonable manner. Before rough plastering on the pipe surfaces the concealed pipes shall be secured to the wall by using proper supports/ clamps.
43. After completion of work and before issuance of certificate of virtual completion the contractor shall submit 4 sets to the Architect / Engineer-in-charge, indicating the position where different works are carried out.
44. The contractor shall be provided adequate storage/ office space for his use. The space has to be maintained/ constructed by the contractor as per his usage requirements.
45. All spaces allotted to the contractor as described above shall be vacated and all structures removed from site at any time as and when required and directed by the Architect / Engineer-in charge, unconditionally and without any reservation. The Architect / Engineer-in-charge will not be obliged to give any reason for such removal. Upon receiving instructions to vacate the space, the contractor shall immediately remove all his structures, materials, etc.from the sources and clear and clean-up the site to the satisfaction of the Architect / Engineer-in- charge.
46. It shall be the responsibility of the Contractor to safeguard the site and ensure that no illegal encroachments are made by outside elements within the area allotted to the contractor. Upon completion of the work or earlier as required by Architect / Engineer-in-Charge, the contractor shall vacate the land totally without any reservation.
47. The security of workmen, materials, equipment stores etc. within the area allotted to the contractor shall be the responsibility of the contractor.
48. The site of work shall have required equipments for various tests at site by the contractor at his own cost and nothing extra shall be payable on this account.

49. The contractor shall arrange following minimum plant and equipments at site for the execution of work. These may have to be increased depending on the requirement site.
50. The quantities indicated are for guidance only however it May vary to any extent and the contractor should not have any financial or other implications for such variations. The Bank reserves to reduce the scope of work of any item if the contractor fails to deliver the works in time and the contractor shall not ask for any financial consideration for such deletion of scope of the work.
51. Any extra item shall be worked out as actual cost of the materials and actual cost of the labour plus 15% as overhead and profit. The decision of Engineer-in-charge will be conclusive and final binding on the contractor.
52. The contractor shall take photographs of site prior to commencement of work, during construction and after completion of work as suggested and shall submit the photographs in soft and hard copies to Bank for which no extra payment will be made.
53. If required and directed by Architect / Engineer-In-Charge, contractor shall arrange visits of his personnel comprising of Architect / Engineer-In-Charges to various places/ plants in or out side the premises to check and verify the quality of material at manufacturer"s places. No extra cost shall be given for this to contractor.
54. Layout of works shall be got checked by Architect / Engineer-in -charge & only then further work shall be taken by after approval.
55. All electrical works shall be got carried out through licensed Electrical Contractor having experience of similar work. Successful bidder to submit the details of licensed Electrical Contractor before start of Internal Electrification Work , if any. The work shall be executed as per specifications and strictly in keeping with relevant IS code and rules and regulations of authorities.
56. The work should be carried out as per latest CPWD specification and as per the standard engineering practice. All measurements shall be made as per CPWD norms. However, partition and panelling shall be measured up to bottom of false ceiling however, its anchoring shall be done at bottom of RCC slab and plywood shall also be provided upto RCC slab bottom.
57. Site should be cleaned every day and all the unusable material / malba shall be removed from the site and unusable materials shall be stacked properly so that there is no hindrance for staff and public failing which bank will remove the same at their level and suitable amount shall be recovered from the contractor"s bill.
58. The contractor shall be required to maintain the coordination with the Building Maintenance Contractor, if required.
59. No old / dismantled material shall be used by the contractor in the work under any circumstances. Unless otherwise specified or under instruction of the bank.
60. The bidder to visit the site and examine the rebate items and site condition before quoting the rates.
61. Dismantling & taking away includes the disposal of unserviceable material / malba to Approve municipal yard.
62. The Rebate items will be the property of the contractor. Rates of rebate item shall be considered as negative while calculating the value of tender and the same are to be quoted in negative only.
63. The Contractor shall comply with the provisions of Contract, Labour (Regulation & Abolition) Act, 1970, Minimum Wages Act and all other Labour Laws and other Statutory Regulations (both Central and State) that may be enforced from time to time by the appropriate

authorities. Bank shall not be held responsible for any penalty on failure of the any Labour Regulations. Bank shall have the power to inspect the Wage Register and for physical verification of salary paid to the staff with reference to any records of the Contractor and to insist the Contractor to comply with Laws.

64. Contractor should obtain necessary permission that may be required for the purpose of this Contract from such authorities as may be prescribed by Law from time to time.
65. Contractor or his authorized representative should visit the site frequently as required by the Bank and meet Bank's Architect / Engineer with prior appointment for any clarifications and to receive instructions, take measurements, etc. at the site.
66. The Contractor should arrange to issue photo identity card to his workers.
67. Any act of indiscipline / misconduct / theft / pilferage on the part of any employee engaged by the Contractor resulting in any loss to Bank in kind or cash will be viewed seriously and Bank will have the right to claim damages or levy fine and / or terminate the Contract forthwith, if necessary.
68. In case of any default or failure on Contractor's part to comply with all / any one of the Terms/ Conditions, Bank reserves to itself the right to take necessary steps to remedy the situation including, inter-alia, the deduction of appropriate amount / s from dues otherwise payable to Contractor and / or by taking recourse to appropriate recovery proceedings.
69. Keeping the area clean and removal of debris: Contractor shall arrange to dispose off debris, any other waste product created while carrying out the work, outside Bank's premises. The Contractor shall take due care while disposing of such waste materials and ensure that any rules / regulations laid down by Municipal Corporation or any other statutory body are not violated. The Contractor shall be responsible and answerable to any complaint arising out of improper disposal of waste material. Quoted rates shall involve the cost of same and no extra payment shall be made towards this account.
70. It is mandatory to provide purchase voucher of the material where basic rates are given in BOQ. However, Bank may instruct the contractor to submit purchase voucher/test certificate of any material.
71. The specifications for the entire work shall be in accordance with latest CPWD specifications and latest IS codes. Whenever these codes are silent, the same shall be governed by sound engineering practice and the decision of the Bank in matter of interpretation shall be final and binding on the contractor.
72. Electricity & Water will be arranged by Contractor at his own cost. Further necessary arrangement/extension, if required, shall be done by the contractor at his own cost with the approval of Bank.

LIST OF MATERIALS OF APPROVED BRAND / MANUFACTURER :

1. Paint & primer: Berger, Asian Paints
2. Melamine Polish : Asian Paints or approved equivalent
3. Vitrified Tiles : Kajaria, Orient, Johnson
4. Mirror / Glass : Modi, Saint Gobain.
5. Cement : Ultratech, Lafarge , Ambuja.
6. C.I Pipes : Bic, Neco.
7. G.I./ PVC Pipes : Tata / Astral make
8. G.I. / PVC Fittings :Tata / Astral make
9. Gun Metal valves, : Indian valve company, Kirloskar
10. W.C., pans, : Hindustan, Parryware.
wash basins etc
11. Flush valve : Jaquar .Hindware
12. Toilet Accessories : Jaquar ,Hindware
13. TMT Bar : TATA/SAIL

TECHNICAL SPECIFICATIONS

1. Cement

Unless otherwise specified the cement to be used shall be ordinary portland cement of Ultratech / Lafarge / Ambuja make of 53 grade as per IS:12269

2. Sand

Sand shall pass through I.S. sieve 4.75 mm (3/16 B.S) test sieve, leaving residue not more than 5%. Sand shall be from natural source or crushed stone screenings, chemically inert, clean, sharp, hard, well graded and free from dust, clay, large pebbles, salt, organic matter, mica or other deleterious matter. The sum of all deleterious material in sand shall not be more than 5% of weight. Sand shall be washed, if directed to reduce the percentages of deleterious substances to acceptable limits.

3. Water

Water for mixing cement, mortar shall be clean and free from acids, vegetable matter etc. Only water fit for drinking shall be approved for use.

4. Brick:

Bricks for masonry works shall conform to IS:1077- specification for common burnt clay building bricks and shall be of class 5.0 (with minimum compressive strength of 5.0N/mm^2). Bricks shall be machine molded and shall be made from suitable soils. The bricks shall have smooth rectangular faces with sharp corner and shall be well burnt, sound, hard tough and uniform in colour. These shall be free from cracks, chips. Flaws, stoner humps of any kind.

Stacking of bricks :

Bricks shall be stored at site as per the requirements given in IS:4082 and shall not be dumped at site. They shall be unloaded from trucks to a place on a leveled surface near to the work site. They shall be stacked in regular tiers even as they are unloaded, to minimize breakages and defacement of bricks. The supply of bricks shall be so arranged that as far as possible, at least two days requirements of bricks are available at site at any time. Bricks, of different class, shall be stacked separately.

4. Mortar

The mortar to be used for masonry shall be as instructed by the Architects. The ingredients in the proportions specified shall be measured in gauge boxes and thoroughly mixed dry on a clean approved platform with water added afterwards until all parts are completely incorporated and brought to a proper consistency and used within an hour. Whenever the proportion of cement mortar has not been specifically mentioned cement mortar in the proportion of 1: 5 (cement: sand) shall be used.

If the mortar becomes dry, white or powdery for want of curing, work shall be pulled down and rebuilt at the contractor's expense. No partially or wholly set mortar will be allowed to be used or remixed. When large quantities are required, the mortar shall be mixed by the mechanical means.

1. Workmanship –

English bond shall be used throughout in walling except brick on edge and half Brick walls shall be built in stretcher bond. A good bond shall be maintained throughout the work, both laterally and transversely. All masonry work shall be set out and built to the dimensions shown horizontally and in plumb. No broken bricks shall be used except as closures. After the days work all joints shall be raked to 12mm depth to provide for proper key to plastering. The top of walling shall be wetted where let off before, to provide commencing further brickwork. All junctions of walls and cross walls shall be carefully bonded into the main walls. The walls shall be kept wet for 7 days after constructions. Wooden plates, door frames or window frames shall be bedded in brick work with fixing clamps or holdfasts embedded during course of brick work

2. Mode of Measurement –

Finishes to brickwork such as plaster and cement pointing will be paid for separately under plastering works. 2 nos. 6mm dia MS rod at every third layer shall be provided in half brick partition walls or as directed. Cost of MS rod shall not be measured and paid separately.

3. Plaster –

Surfaces to be plastered shall be well wetted before work is commenced. Concrete wall surfaces to plaster shall be evenly spatter dashed with a thin coat of cement rendering to form a bond. Masonry wall surfaces to be plastered shall have all joints infilled with mortar admixture to the finish surface of the masonry and shall receive a thin coat of cement rendering evenly applied. Base coat shall be laid on evenly, straightened with a rule and scratched to form key. Finishing coat shall be minimum of 2mm thick troweled with a steel trowel to a smooth and even surface with sharp straight corners. Second coat of plaster shall only be applied when preceding coat has properly cured. All plastered and rendered surfaces, floor and wall tiling etc. are to be properly made good around pipes, brackets, grating etc. to continue into grooves of all joinery grooved for same and finished against metal windows etc. with a slightly curved internal angle.

Cement / Plaster for internal surfaces shall be applied in two coats, as follows: -

Undercoat 3/8'' thick, composed of 1 part cement, 3 parts lime putty, 6 parts clean washed sand, measured by volume, the whole laid evenly, straightened with a rule and scratched to form key.

Finishing coat 3/8'' thick composed of 1 part cement, 3 parts lime putty and clean washed sand, measured by volume, troweled with a steel trowel to a smooth or textured finish in accordance with samples approved by the Architect.

The total thickness of the plaster must not exceed 3/4''

Rough rendering shall be composed of cement and sand (1:4) floated to the thickness required to fill in voids behind facings, dubbing out to uneven surfaces, etc. Dubbing out must not under any circumstance exceed 1'' in thickness at any point.

Screeds and backings shall be composed of cement and granite – fine or sand (1:3) and shall be properly laid to rules and floated to a surface suitable to receive the finishing specified.

Joints of brickwork, etc., are to be thoroughly raked out and loose particles of mortar etc. brushed out to form key for plaster. Concrete work generally is to have a coat for 'Spatterdash' applied to form key for plaster, etc. The Concrete shall be dampened immediately after removal of

framework and spatterdash consisting of a thick slurry, thrown on with a hand trowel to thickness not exceeding ¼". The spatterdash shall be wetted one hour after application and left to harden.

All flooring, wall linings, etc are to be adequately covered up and protected until the completion of the works. The whole of the finished work to be cleaned off and left in sound & perfect conditions to the satisfaction of the Architect.

The total thickness of two-coat work must not exceed ¾"

The rates quoted should include for all materials and labour and for execution of work at any level. Lift of materials will not form a criterion for any extra amount. It also includes providing and fixing scaffolding and removing the same after completion of work, raking out joints, hacking and hatching the concrete surface and providing the key for holding down the plaster, watering, curing etc. complete.

Nothing extra will be paid for work, V joints, Slays, drip mouldings, grooves 1" wide x ½" deep in plaster, making good around pipes, conduits, timbers, cill, braket, railings, etc. and making good after all specialists have done their work. Measurements will be as per the actual area of work done.

The rates for wall plaster and screeds are deemed to include for cleaning and wetting the wall surface.

PAINTING

General

All paints and materials are to be submitted to the Architect for approval of brand, type and colour before application.

If the name of a brand or a supplier is mentioned under the Specification, only paint or primer of that manufacturer is acceptable. The Contractor is required to order the material specified in due time and substitution shall be permitted on the ground that the brand specified is not available in the local market.

Contractor shall provide 2 samples of each colour & texture to simulate actual condition. Each samples shall be resubmitted and requested until acceptable sheen, colour and texture and achieved.

Materials delivered to the site shall be so stored as to minimize exposure to extreme temperature. All materials shall be delivered to the job site in original, new and unopened packages and containers, bearing manufacture's name and label and the following information. Name of title of material, manufacturer's stock name and date of manufacture, thinning instruction, application instructions, colour name and number with reference to Architect's colour schedule.

The Contractor should supply colours and shades of paint in sufficient quantity to complete all work in any particular colour or shade.

Paint is to be stained free from all skin and extraneous substances and shall be thoroughly mixed in clean containers during use.

Thining of paint materials, when necessary shall be carried out with the type of tinner and in the proportions recommended by the manufacturer.

All painting shall be done by skilled workers under the supervision of a capable foreman.

All primers shall be applied by brush. Subsequent coat to be applied by brush, spray or roller unless otherwise directed.

All coats shall be thoroughly dry before applying succeeding coat, sand surfaces between coats as necessary to produce a smooth finish. Do not tint finished coats

All surfaces to be painted shall be thoroughly dry. Do not paint concrete and plaster surfaces until they have completely cured.

Surface of woodwork finish which are to be scraped and rubbed down by sand papers.

Concrete and plaster surfaces to be painted shall be suitably primed. Holes, cracks and other imperfections to be patched with compound as recommended by the paint manufacturer. All surfaces to be painted shall be even.

All surfaces to be painted shall be cleaned and free of dirt, dust and any other substance which might interfere with the functioning of the painting system.

Primed or undercoated woodwork and metal work shall not be left in an exposed or unsuitable situation for an undue period before completing the painting process.

Stopping and filling shall be deemed to be included for all metal works, plaster works and wood works specified to be painted. Only suitable material should be used to produce a surface ready for priming and painting.

The Contractor shall make sure that solvents and points are kept away from and shall not stain metal work, aluminium work, tiles, marble, wood, glass etc.

The Contractor shall leave all glass, cabinet work, plaster, floor, hardware and any other surfaces clean and free from any paint, stain, spattering, smears or smudges. The Contractor shall replace any damaged glass or other items and clean as necessary.

All work, fittings, furniture etc are to be suitably protected during the execution of the work. Splashes on floors, walls etc are to be removed during progress of work and the whole left clean and perfect on completion.

All hardware accessories, plate, lighting fixtures and similar items shall be removed prior to painting and shall be replaced upon completion of each area.

Upon completion of the work, the carpenter shall remove and dispose all scaffolding and equipment, surplus material, empty containers and other debris, leaving the premises clean and neat.

Plastic Emulsion Paint –

The surface shall be prepared as specified. A coat of approved primer shall be applied on the prepared surface.

After 24 hours a coat of paints shall be applied evenly and sand papered after drying.

Then a filler putty coating shall be done for smooth and leveled finish of the surface.

Over this coats of paint shall be applied as directed (minimum two coats shall be applied) Each coat shall be allowed to dry thoroughly and then lightly rubbed down with sand paper and cleaned of dust, before the next coat is applied.

The final coat if directed shall be rolled with an approved roller or stippled with a brush. On completion of the job the surface shall be uniform in finish without any hair marks from the brush or clogging of paint puddles in the corners of panels, angles of mouldings etc.

While painting work is being carried out, flooring, dado skirting and other finished work shall be fully protected from being smeared with paint. Any paint marks shall be cleaned instantly. The contractor shall cover for this in his rates and clean areas after the painting is over.

PLAIN AND REINFORCED CEMENT CONCRETE :

General :

Except where they are varied by the requirements of this specifications due provision of Indian standard specification IS : 456 – 1978 for plain and reinforced concrete and IS : 432 part I and II for mild and medium tensile steel bars and hard drawn steel wire for concrete reinforcement and any other relevant ISS applicable together with the latest amendments shall be held to be incorporated in this specification. It shall be intent of these specifications to ensure that all concrete placed at various locations of the job should be durable, strong enough to carry the design loads, it should wear well and practically be impervious to water. It should be free from such defects as shrinkage, cracking and honeycombing.

Mild steel bars shall be plain, round, hot rolled steel bars complying with the Indian Standard Specifications No. 432. Specification for Mild Steel and High Tensile Steel Bars and hard drawn steel wire for concrete reinforcement.

High Tensile Steel may be deformed or ribbed bars conforming to IS – 1786 bars and hard drawn steel wire and fabrics conforming to Indian Standard Specifications No. 1566.

Proportions in the mix:

In ordinary concrete, excluding controlled concrete proportions of cement to fine and coarse aggregate shall be as specified in the respective items and shall be accurately measured. These proportions are based on assumption that the aggregates are dry. If aggregates are moist allowance shall be made for surface water present in aggregate when computing water surface and shall be determined by one of the field methods described in IS 2386 (Part III). In the absence of the exact data, the amount of the surface water may be estimated from the values given in table A.

Mixing –

Concrete of 1:2:4 or richer mix shall be mixed in an approved mechanical mixer. The mixer and the mixing platform shall be suitably protected from wind and rain. Aggregate shall be accurately measured out in boxes and mixed dry along the cement, water shall then be added in measured quantity and mixing be done for less than two minutes.

Consistency –

Quantity of water for making reinforced concrete shall be sufficient, so as to ensure that concrete shall surround and properly grip all the reinforcement. The best consistency shall be that which flows sluggishly without flattening out and without separation of coarse aggregates from the mortar. The degree of plasticity shall depend on the nature of work and atmospheric temperature and whether the concrete is vibrated and compacted. The slumps shown in table B obtained by the standard slump test carried out in accordance with the procedure laid down in IS: 1199 – 1959 shall be adopted for different types of work.

Admixture:-

The use of Admixture may be allowed only if approved by the structural consultant and his decision in this regard shall be final.

Transporting –

Concrete shall be conveyed from the place of mixing to the place of final deposit as rapidly as practicable by methods which will prevent segregation or loss of any of the ingredients. If segregation does not occur during transport the concrete shall be remixed before being placed. In no case more than thirty minutes shall elapse between mixing and consolidation in its position.

Placing and Compacting :-

Concrete shall be placed in layers of suitable thickness or in strips and compacted before initial setting commences and should not be subsequently disturbed. The method of placing shall be such as to preclude segregation and as far practicable the placing shall be continuous. Special care, shall be taken in accordance with IS : 456 while laying concrete under extreme weather. Concrete shall be thoroughly compacted during the operation of placing and thoroughly worked around the reinforcement embedded fixtures and spaded, against corners of the formwork and by punning, rodding, mechanically vibrating or by other approved means. In addition form work shall be tapped lightly by using wooden mallet at the pouring head. The number and type of vibrator to be used shall be subject to the approval of architects and in general immersion type vibrators shall be used. External vibrators shall be used whenever directed. The intensity and duration shall be sufficient to cause complete settlement and compaction without any stratification of successive layers or separation of ingredients or formation of laitance. Vibrators shall be inserted vertically in the concrete at points not more than 45 CM apart withdrawn very slowly when air bubbles no longer come on the surface. Over vibration or vibration of wet mixes is harmful and should be avoided. Care shall be taken to utilise the vibrator only to compact the concrete and not to spread it. Sufficient numbers of reserve vibrators in good working condition shall be kept on hand at all times so as to ensure that there is no slackening or interruption in compacting.

FORM WORK :

The form work shall conform the shape, lines and dimensions as shown on the plans and be so constructed as to remain sufficiently rigid during the placing and compacting of the concrete and shall be sufficiently watertight to prevent loss of cement slurry from the concrete. Form work or centering shall be constructed to steel or timber and adequately designed to support the full weight of wet concrete ramming and setting of concrete shall be properly seasoned so as to prevent deformation when wetted.

All the column sides, beam bottoms and beam sides shall be 12mm thick water proof ply with proper supporting system in 2'' x 2'' wooden members. All the centering materials shall be totally new, beginning from foundation level. Material broken during the progress of work shall have to be replaced by new centering material. At any stage old damaged material will not be accepted.

All props shall be minimum 4'' dia straight and full height and no joint shall be allowed where additional staging is necessary extra care shall be taken to use bigger dia. Props with bracing at 4 or 5 stages. At time of removing props. the wedges shall be gently eased and not knocked out.

All rubbish, chipping, shavings and sawdust shall be removed from the interior of the forms before the concrete is placed and the formwork in contact with the concrete shall be cleaned and thoroughly wetted or treated with non sticking mineral oil or any other approved material. Care shall be taken that oil or such approved material is kept out of contact with the reinforcement.

All form work shall be removed without shock or vibration and shall be eased to carefully in order to allow the structure to take up its load gradually. Forms shall not be disturbed until concrete has adequately hardened to take up superimposed load coming on it and in no circumstances shall forms be struck until the concrete reaches a strength of at least twice the stress to which concrete may be subjected at the time striking. In the normal circumstances (generally where temperature is above 21 degrees centigrade and where ordinary cement is used) forms may be struck after expiry of following periods from placing of concrete or as may be directed by the Architect.

- | | |
|---------------------------------------------------------------------------------------------------------|------------|
| a) Wall, columns and vertical sides of beams | - 48 hours |
| b) Bottom of slab upto 4.5 m | - 7 days |
| c) Bottom of slab above 4.5 m slab, bottom of beam & arch rib upto 6m span & bottom of cantilever slabs | - 14 days |
| d) Bottom of beams & arch rib over 6m span | - 21 days |

Surfaces that becomes exposed on removal of forms shall be carefully examined and any fins, burns, projections etc that are detected shall be removed. Any honeycombing even of minor nature shall not be finished neatly with cement mortar 1:2 getting approval from architect.

Any work showing signs of damage though premature or careless removal of centering or shuttering, shall be reconstructed by the contractor at his cost.

Tests :

Test on concrete shall be carried out in accordance with IS : 456 and any other IS applicable. The frequency of works test shall be at such intervals as ordered by the Architect and subject to that every 150cm, concrete placed or part thereof & for a day's concrete exceeding 20 cu.m. batch of 6 cubes shall be made for every sample & 3 of them tested after 7 days & the remaining 3 cubes shall be tested 28 days. The criteria for acceptance of a concrete as confirming to the specified proportion grade of concrete shall be in accordance with IS : 456 and the contractor shall entirely redo the rejected work at his own cost. Strength of 28 days shall alone be considered for acceptance.

The contractor shall arrange to carry out the tests in accordance with the relevant Indian standard specifications at the site laboratory or in an approved laboratory and the test reports in original submitted to Architect. The entire cost of laboratory equipments and testing shall be borne by the contractor.

Steel Reinforcement

Reinforcement shall be accurately fabricated placed and adequately maintained in position as shown on drawings or as directed by the Architects. All finished bars shall be free from cracks, surface flaws, laminations, jagged and imperfect edges. Plastic or dense cement mortar blocks shall be used to give requisite cover as shown on the drawings or as directed and all intersections shall be firmly tied with binding wire of 16 to 18 guage. Reinforcement shall be bent in accordance with the procedure stiputaled in IS : 2502 – 1963 and will not be strightened in a manner which will injure the material. All reinforcement shall immediately before placing in concrete be thoroughly cleaned of loose mill scale, loose rust oil and grease or other deleterious matter that would destroy or reduce bond.

Reinforcement in reinforced concrete members shall not be connected by welding or coupling except in accordance with relevant IS and with the previous approval of Architect. Overlaps and joints shall be straightened and located at points along the span where neither shear nor bending movement is maximum.

Cover

At each end of reinforcement bar not less than 25mm, nor less than twice the dia of such rod or bar (B) For a longitudinal reinforcing bar in a column not less than 40mm nor less than the dia.of such rod or bar. In the case of columns of minimum dimension of 20 cm. Or under whose reinforcing bars does not exceed 13mm, the cover of 25mm may be used.(c) For longitudinal reinforcing bars in a beam not less than 25mm nor less than dia.of such rod or bar.(d) For tensile, compressive, shear or other reinforcement in slab not less than the dia. of such reinforcement.(e) For, any other reinforcement not less than 13mm nor less than the dia. of such reinforcement.

TABLE 'A'

Aggregate	Approx.qty of surface water in litre Per cubic metre.
1. Very wet sand	120
2. Moderately wet sand	80
3. Moist sand	40
4. Moist gravel or crushed rock	20 to 40

Note : Coarser the aggregate, lesser the water it will carry.

TABLE 'B'

S.No	Type of Work	Slumps when vibrated	Slumps when not vibrated
	Mass concrete in R.C.C. footings, Retaining wall and Road slabs.	2.5 cms	5 cms
	Beams, slabs, columns, with simple reinforcement	2.5 cms to 5 cms	5 to 10 cms
	Thin sections with congested reinforcement	5 to 10 cms	10 to 15 cms

Note : Should conditions governing slump and workability change pointing to advisability of an increased slump, this shall only be done by decreasing the amount of aggregate and not increasing the amount of water.

4. Mode of Measurement –

Measurements of all works shall be as per IS: 1200 if nothing is mentioned in the tech. spec./ schedule of rates/quantities

AGGREGATE

General

Coarse and fine aggregates for civil and structural works shall conform in all respect to IS:383(Specifications for coarse and fine aggregates from natural sources for concrete).Aggregates shall be obtained from an approved source known to produce the same satisfactory .Aggregates shall consist of naturally occurring (crushed or uncrushed)stones gravel or sand or a combination of there of . These shall be chemically inert , hard strong dense durable clean and free from veins , adherent coatings , injurious amount of alkalis , vegetable matter and other deleterious substances such as iron pyrites , coal lignite mica shale sea shells etc .

Source and type of aggregates shall be got approved by the Engineer in charge prior to procurement, change in source and type of aggregates at later stage shall not be generally permitted. but under specific circumstances Engineer in charge can allow a change in source and type of aggregate . Contractor shall produce necessary test certificates from approved laboratories regarding the quality and suitability of the proposed aggregates and submit fresh mix design for approval of the Engineer in charge . Any such change , if permitted by the Engineer-In –charge , shall be without any time and cost implementation to the owner .

Aggregates which may chemically react with alkalis of cement or might cause corrosion of the reinforcement ,shall not be used .if so desired by the Engineer –In-charge , the contractor shall carry out reactivity tests and submit the results to his approval.

The maximum quantities of deleterious materials in the aggregates as determined in accordance with IS 2386- part II(Methods of test for aggregates for concrete), shall not exceed the limits defined in IS :383.No special test is required to prove the absence of such deleterious matters if the aggregates are from a known source with satisfactory prior data on the properties of concrete made with them . in case of newly developed quarry sites , the contractor shall submit necessary test results as per IS:383 and IS:2386 to the Engineer in charge prior to his acceptance and approval . The method of sampling shall be in accordance with the requirements given in IS: 2430.

Coarse and fine aggregates shall be batched separately..

Whenever required by the Engineer –in –charge, the aggregates (coarse/fine)shall be washed and /or sieve by the contractor before use in the works to obtain clean and graded aggregate at no extra cost to the owner .

Aggregates not in conformity with the specifications shall be rejected and the contractor shall immediately remove them from the site work.

COARSE AGGREGATES

Coarse aggregates are the aggregates ,, which are retained on 4.75 mm BIS sieve .It shall have a specific gravity not less then 2.6(saturated surface dry basis).

These may be obtained from crushed or uncrushed gravel or stone as per clause 3.1 and may be supplied as single sized or graded. The grading of the aggregates shall be as per IS:383 or asrequired by the mix design , to obtain densest possible concert . for this purpose , the contractor shall submit to the Engineer –in –charge may allow “All-in-aggregates “to be used provided they satisfy the Requirements of IS:383.

FINE AGGREGATES

Fine aggregates are the aggregates which pass through 4.75 mm BIS sieve but not more than ten percent (10%) pass through 150 micron BIS sieve. These shall comply with the requirements of grading zones Iliad III of IS: 383. Fine aggregates conforming to grade Zone IV shall not be used for Reinforced concrete works.

Fine aggregates shall consist of material resulting from natural disintegration of rock and which has been deposited by streams or glacial agencies , or crushes stone sand or gravel sand from sea shore , creeks or river banks affected by tides shall not be used for filling or concert works.

STORAGE OF AGGREGATES:

Storage of all type of aggregates at site of work shall be at contracture's expense and risk and shall be stored as specified in IS:4082. Aggregates shall in no case be stored near to the excavated earth or directly over ground surface.

The contractor shall maintain sufficient quantities of aggregates, near to the place of work required for the continuity of the work, each type and grade of aggregate shall be stored separately on hard , firm surface having adequate slope for drainage of water .

Aggregates delivered at site in wet condition or becoming wet due to rain or any other means shall not be used for at least 24 hours. the contractor shall obtain prior approval of the Engineer In charge for the use of such aggregates and shall adjust the water content in accordance with IS:2386 to achieve the desired mix . in the absence of the test results, and to allow variation in mass of aggregates and water content on account of moisture content , the contractor can make suitable adjustment in the masses in the as per IS:456, for preparation of nominal

STAGING / SCAFFOLDING

Staging /scaffolding shall be properly planned and designed by the contractor. Use of only steel tubes is permitted for staging /scaffolding. The contractor shall get it reviewed by Engineer in charge before commencement of work. While designing and during erection of scaffolding / staging , the following measures shall be considered:

- (a) Sufficient sills or underpinnings in addition to base plates shall be provided particularly where scaffolding is erected on soft grounds .
- (b) Adjustable base to compensate for uneven ground shall be used .
- (c) Proper anchoring of the scaffolding/ staging at reasonable intervals shall be provided in each direction with the main structure wherever available .
- (a) Horizontal braces shall be provided to prevent the scaffoldings/staging from rocking .
- (b) Diagonal braces shall be provided continuously from bottom to top between two adjacent rows of up rights.
- (c) The scaffolding/ staging shall be checked at every stage for plumb line.
- (d) Wherever the scaffolding/staging is found to be out of plumb line it shall be dismantled and re-erected a fresh and effort shall not be made to bring it in line with a physical force.
- (e) All nuts and bolts shall be properly tightened and care shall be taken that all clamps /coupling are firmly tightened to avoid slippage .
- (f) Erection work of a scaffolding/staging under no circumstances shall be left totally to semi-skilled workmen and be carried out under the supervision of a technically qualified civil engineer of the contractor. For smaller works or works in remote areas , wooden ballies may

be permitted for scaffolding/ staging by the Engineer in charge at his sole discretion .The contractor must ensure the safety and suitability of such works as above .

SPECIFICATION FOR PLUMBING, DRAINAGE AND WATER SUPPLY

General

The scope of work covers plumbing, drainage and water supply as instructed by Architect. In accordance with the drawing and specifications prepared and under the direction and to the satisfaction of the Owner and Architects.

Dimensions –

Figured dimensions in all cases are to be followed and in no case should they be scaled. Large scale details shall take precedence over small drawings. In case of doubts, the Contractor is to ask for clarification from the Architect before proceeding with the work.

WORKS TO COMPLY LOCAL REGULATIONS AND RATES TO INCLUDE

All sanitary installations, water supply & drainage shall conform to the local Municipal by – laws and / or rules and regulation of Local Bodies and the work shall be inspected and passed by the various authorities having jurisdiction.

The work shall be carried out through a licensed contractor.

The rates quoted shall be for completion items as fixed in position and cover all costs of materials, labour, tools, supervision, cutting of holes, chases etc. and also for providing fixing arrangements viz. Clamps, brackets, wooden blocks etc. The rates shall also include restoration of the original condition of all damage to walls, floors etc, during the process of fixing sanitary installations, water supply and drainage. All debris of plumbers excavation etc shall be removed without any extra charge. The plumbing work or the other building work affected by the Plumber's work shall be left thoroughly to the satisfaction of the Architect / Owner.

All C.I. Pipe, brackets, C.I. Cisterns, G.I.Pipes and fittings, M.S. fixture, A.C. Pipes & fittings shall be painted with one coat of approved primer and 2 coats of enamel / oil paints. All painting works shall be carried out to the entire satisfaction of Architect / Owner. If directed, additional coats of paint shall be applied to get uniform and matching finish without any extra coat.

All cuttings, chasing and fixing work, concealing work, shall be completed before commencement of any plastering, tiling and finishing.

The Contractor shall be responsible for the adequacy & efficiency of the entire plumbing system and if in his opinion, he finds any serious objection to the system shown on the drawings, he shall set forth his objections or his suggestions to ensure adequacy & efficiency of the said system & notify the Architect / Owner before proceeding with the work.

Unless other specified, galvanized iron pipes and pipe fittings shall be heavy quality conforming to IS 1239 and shall be tested if required by the Architect/Consultant/Owner.

The work in every respect during its progress and till its final acceptance by the Architect/Owner, including raw material delivered to the works site to be incorporated do use in construction of the work by the Contractor shall be under charge & in the care of and under the responsibility of the Contractor & at his risk. Any loss or damage to such materials or work prior to final acceptance of the work by the Architect / Owner shall immediately be replaced by the Contractor at his expense.

INTERNAL WATER SUPPLY

G.I. PIPE / PVC PIPE & FITTINGS

The pipes shall be of the class specified in the schedule of quantities and shall be of , galvanised steel, welded or seamless, screwed & socketted and shall conform to IS 1239. They shall be manufactured by a firm of repute. All fittings shall be malleable iron galvanised fittings of approved best Indian make.'

Laying and Fixing - Where pipes have to be cut or re threaded, ends shall be carefully filled out so that no obstruction to bore is offered.

For internal work, all pipes and fittings shall be fixed truly vertical and horizontal either by many of standard pattern holder bat clamps keeping the pipes of 12mm clear of the wall wherever to concealed as directed.

Testing – All PVC / G.I. pipes and fittings shall be tested in an approved manner to ensure that proper materials such as white lead & hemp that have been used in joints must be made leak proof by tightening or redoing at Contractor's expense.

Plumbing Fittings – All plumbing shall be of approved quality & design. They shall be fixed in the pipe line in a workmanlike manner & care shall be taken to see that joints between fittings & pipes are made leak proof. The fittings & joints shall be tested in an approved manner to ensure that the joints are leak proof. The defective fittings and joints shall be repaired or redone / replaced.

Sanitary Fittings – As approved by the Architect / EIC or Jaguar make.

Miscellaneous –

Tools, Material & Storage –

The Contractor at his own cost & charge shall provide all materials, tools, testing, materials, scaffolding, labour & electric power necessary for the perfect completion of the whole work.

The Contractor shall pay the fees for testing the materials, if directed by the Architect / Owner and Local Authorities or other Statutory Authorities.

Any materials, brought at site shall not be removed without the written authority of the Architect / Owner & when the Contractor shall receive payment in respect of any certificate in which it is stated that the value of any unfixed materials on the work has been taken into account, such

materials shall become the property of the Employer & the Contractor shall be liable for any loss or damage hereto.

The Contractor shall insure the work against damages, for which sum as the Architect / Owner may time to time direct. All insurance policies are to be taken out in the joint name of the Employer & the contractor in an office selected by the Architect / Owner and all policies and receipt shall be deposited with the Architects / Owners.

All the brackets & hangers for pipes shall be fixed to the wall or R.C.C. slab using 'Desh' fasteners, wherever necessary.

Surplus material from the site shall be carried away by the contractor without cost to the employer & storage space provided to the contractor shall be handed over to the employer clear and ready for occupation.

Floor & Wall Clean out Arrangements – Shall be using G.I. coupling & brass screwed plug & socket with hexagonal head. Brass screwd socket shall be soldered to G.I. coupling. These shall be inserted into the pipe socket or fittings socket at the clae n out point and fixed with lead caulked joint.

Hangers & supports – Provide hanger & support brakets as follows :-

PVC/G.I. pipes :- PVC/G.I.pipes, from 15mm dia to 65 mm dia., running along walls shall be fixed with G.I. 'U' clamps

For pipe sizes from 75mm dia and above 'U' clamps fabricated out of M.S. flat 3mm thick & 40mm wide shall be used.

G.I.Soil, Water & Vent :- 'U' clamps fabricated out of m.s. flats 3mm thk & 40mm wide shall be used.

For fixing hanger supports to the wall or ceiling 'Desh' fasteners of appropriate size shall be used.

Provide space for hangers as noted below :-

15mm to 20mm	1.5 meter
25mm to 40mm	2.0 meter
65mm to 75mm	3.0 meter
100mm and above	4.5 meter

Provide floor stands, masonry piers, etc for all lines running near the floor or near walls and which can be properly supported or suspended by the walls or floors. Pipe lines near concrete or masonry wall may also be hung by hangers carried from wall brackets at higher level than pipe.

5. Mode of Measurement :-

- a) All drain pipes shall be measured in linear lengths along with center line of the drainage line laid. Deduction shall be made for fittings length etc. The rate shall include all work as specified in the respective items.

- b) All cast iron spigot and socket of flanged pipes shall be measured in linear lengths along the center line completed. Deductions shall be made for fitting lengths. The rate shall include lead caulking or nut & bolt joints etc.
- c) Cast iron fittings such as spigot & socket fittings, flanged fittings shall be measured in numbers.
- d) All sanitary fittings and fixtures shall be measured in number & the rate shall include all the work specified in the respective item.

All G.I. pipes shall be measured in linear lengths along the center line of the pipe including G.I. fittings. The rate of pipe line upto & including 50mm dia shall be inclusive of all G.I. fittings, unless otherwise specified. In the case of pipe line of diameter above 50mm dia G.I. fittings will be measured in numbers & paid extra over the linear measurement. The rate in all cases will be inclusive of all as specified in the respective items.

The diameter of pipes & fittings mentioned in the specifications are the inside diameters in all cases.

Technical Specifications :-

In case there are no specifications covering certain items of work, then for these items of work, I.S.I specifications shall prevail. In the absence of I.S.I. local specifications will prevail. Any localised strike by the Contractors personnel / labour shall not form part of the force majeure clause.